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PUBLICATIONS OF

THE STATE HISTORICAL SOCIETY OF WISCONSIN

EDITED BY

JOSEPH SCHAFER

SUPERINTENDENT OF THE SOCIETY

THE WISCONSIN LEAD REGION

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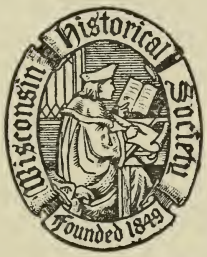
WISCONSIN DOMESDAY BOOK

GENERAL STUDIES VOLUME III

The Wisconsin Lead Region

BY

JOSEPH SCHAFER



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FOREWORD

The present volume is the third in the *General* series of the *Wisconsin Domesday Book*, the first being the author's *Agriculture in Wisconsin*, the second his *Four Wisconsin Counties, Prairie and Forest.* The publication, in atlas format, of the so-called *Town Studies* was experimental and has had no successor in the *Domesday* series.

The lead region study differs from the *Four Wisconsin Counties* in combining the history of an important extractive industry, lead mining, with the history of the development of agriculture. Unlike the previous study, also, which did not deal with the industrial cities of the lake shore located within the boundaries of the counties surveyed, this book takes account of the leading towns, none of them large, which have served the several communities.

Special attention is directed to the article which appears as Appendix IV, prepared by Professor Vernor C. Finch of the Geography Department, University of Wisconsin. Professor Finch, desiring to work out such a careful detailed study of a typical farming district, devoted a large part of his summer vacation in 1928, with an assistant, to the Montfort area. His results are decidedly interesting and throw much light on the utilization of the land in the two contrasted types of terrain about which so much is said in the book proper—the rough lands of the north slope, and the prairies.

Appendix II, "Origin of the Wisconsin Lead and Zinc Deposits," the work of a young Wisconsin and

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Harvard University geologist, Paul A. Schafer, supplements and checks, in a thoroughgoing scientific survey of the region, what is written for laymen by a layman mainly in chapters II and VIII.

The illustrations, it is believed, will constitute a welcome new feature of the *Domesday* publications. The index has been prepared by the assistant editor, Lillian Krueger. The publication was paid for out of the income from the Burrows Fund, devoted to the *Domesday Studies* by action of the Executive Committee of the Society.

JOSEPH SCHAFER

MADISON, DECEMBER, 1930.

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THE WISCONSIN LEAD REGION

CHAPTER I

THE STORY OF LEAD [1790-1861]

LEAD, which ranks as one of the heaviest, softest, most pliable but least ductile of the metals, is denied the ennobling adjective "precious"; yet it is so "useful" that a lead famine in any civilized country would doubtless prove more disastrous than would a failure of that portion of the gold supply used in the arts and in decoration. A multitude of human interests pay tribute to the gray metal. The mariner, distressed by storms on dangerous coasts, makes out of it a plummet to gauge the depth of water through which his vessel labors; the fisherman uses it to sink his bait to the levels where the fish habitually live; the pioneer moulds it into bullets for his rifle; the builder uses it to plumb his walls, to shape conduits, to frame light-panes, to water-tighten roof joints, or to cover entire structures; the type founder employs it in mixing his alloy, as does the pewterer for fashioning plates, mugs, and candlesticks.

In addition to these and scores of other uses of raw lead, preparations in which lead forms the base are numerous and significant. Early civilized man, in Egypt and elsewhere, had made the discovery that the flakes of oxidized lead were useful for various purposes, and also that oxidation could be hastened by the use of acids and heat. Here, probably, is the origin of white lead and of red lead, universally used, in connection with linseed oil, for paints. Other lead products are litharge,

chrome yellow, and sugar of lead, all valuable in the arts, the latter also used in medicine.

The art of lead working has descended to us from antiquity and has served as one means of man's development. The lead pipes found so abundantly by archeologists in Roman palaces and baths illustrate one principal use made of lead by these great builders who also, according to Pliny, used an alloy of lead and tin for soldering. Romans, Carthaginians, and Moors, for many generations, worked the mines of Andalusia to an enormous extent, as the mountains of slag, later resmelted by the Spaniards, attest. Lead mining is an ancient industry in Britain. The leading mines of that metalliferous island, those of Derbyshire and of Alston Moor, near the junction of Cumberland, Durham, and Northumberland, have been among the richest in the world. Other centers of lead production in Great Britain are Cornwall and Devon, the Isle of Man, and the southeastern counties of Wales. In Germany lead was produced in the Rhineland, but principally in the Harz Mountains, while Austria controlled the famous old mines of Carinthia whose product found its vent through the port of Trieste. Some lead was made in Italy, in Belgium, in Holland, and in the Scandinavian countries, but England, during the period covered by our inquiry, was by far the largest European producer of that metal.

The statistical table (Appendix I) compiled from the United States treasury records, shows the movement of lead and lead products to and from America to the beginning of the Civil War. That stretch of years subdivides naturally at 1816, the close of an era of light importations, and again at the year 1841, the beginning of a great movement in exporting American lead. This continued till 1848 after which, down to 1861, imports

once more gain the ascendency. Ordinarily, all but a few thousand pounds of the lead imported into the United States originated in England, and most of the balance in Scotland and Ireland.[1] Yet, this was not necessarily true as a permanent matter, for in 1801 the Hanse ports (Hamburg, Bremen, etc.) provided nearly 200,000 pounds of the 2,000,000 pound total, while the "Floridas and Louisiana" contributed 243,000 pounds, the two sources together furnishing over one-fifth of the aggregate. In 1803 Louisiana furnished 154,000 pounds after which, having become an American territory, her product no longer figures in the record of foreign imports.

By the year 1806 somewhat more than one-fifth of the then large aggregate of nearly 5,000,000 pounds of imported lead originated elsewhere than in British territory. The principal subsidiary contributors were Denmark and Norway (91,000 pounds), Holland (110,000), Spanish Mediterranean ports (521,000), Italy (95,000), and Austrian Adriatic ports (138,000). The white and red lead for painting, however, came almost exclusively from England, save for an increment of 110,000 pounds supplied by Holland. Shipments from England, as would be expected under the disturbed conditions of the time, fell off in 1807 nearly 2,000,000 pounds, though the quantity of white and red lead remained substantially the same that year, declining by nearly 1,000,000 pounds, however, in 1808.

[1] For example, the aggregate, 2,967,760 pounds of 1799 was made up as follows: England, Man, and Berwick, 2,844,522; Scotland, 19,785; Ireland, 35,780; British West Indies, 1,907; British American Colonies, 9,445. This left 56,312 pounds to be accounted for of which Prussia supplies 114; Denmark and Norway, 21,701; Netherlands, 13,000; Hamburg, Bremen, etc., 14,764; France, 4,493; and Portugal, 2,240. The business of supplying the United States with lead was therefore primarily a British concern, just as was the supplying of iron and steel.

The period 1809 to 1814 inclusive was so abnormal in consequence of the embargo and the subsequent war, that accuracy in the treasury figures of importations in American bottoms, cannot be expected. The lead imports from British ports show a catastrophic decline in 1809 to 667,000 pounds, and in fact the six-year interval brought into the United States—according to these figures—only 5,628,753 pounds of lead, or less than a million a year on the average. In one year only, 1812, the bulk of the lead came in from Spain and her dependencies. This was a prophecy of what could happen when the thousands of Spanish mines, so long nearly inert, should be galvanized into new life as they were in the twenties, thirties, and forties of the last century.

The white and red lead imports kept up rather better, the average for the six years being nearly 1,250,000 pounds, the bulk of which was still derived, directly or indirectly, from England though credited in part to "vessels captured," to "all other countries," etc. With the resumption of free intercourse with Great Britain in 1815, normal figures return. The amount of lead imported that year was 3,240,670 pounds of which Great Britain furnished 3,049,670 pounds; she also supplied 2,358,171 pounds of the white and red lead imports totaling 2,602,200 pounds.

Evidently, however, either the country during the time of war and embargo had suffered a kind of lead famine, or else the expansion of all kinds of industries at once increased its powers of absorption. For in 1816 there entered a veritable flood of lead, aggregating 13,840,970 pounds, together with painter's white and red lead amounting to 7,714,715 pounds. If these quantities could have been spread over the lean years, they

would have made the supply for the whole country during that period almost normal.

In treating of the commerce in lead, we as yet can have reference only to the country's home needs, for the exports of that article are negligible in comparison with the imports, and that continued to be the case down to the year 1825. Then for the first time since 1796, when America was doing the world's carrying trade, the exports of "pig, bar and sheet lead" attain the respectable proportion of more than 22 per cent of the imports. The country, in fact, about that time entered upon a new phase, characterized by heavy production of native lead, so that the emphasis begins to shift from imports to exports. It was claimed that the change was due to the doubling of the duty in the tariff of 1824 from one cent per pound to two cents per pound.[2] By 1837 America exported nearly 3,000,000 pounds of native lead. The imports, on the other hand, steadily declined from 1834, until ten years later they had reached the vanishing point, 3,430 pounds, the low stage continuing till 1849. Our period of enormous exports was from 1842 to 1847. The round numbers are, 1842, 14,000,000 pounds; 1843, 15,000,000; 1844, 18,000,000; 1845, 10,000,000; 1846, 16,000,000; and 1847, 3,000,000.

The first appearance in the United States government import tables of the white and red lead item occurs in 1804, but the amount recorded in that year is so considerable, 364,648 pounds, and the known popularity of those preparations for painting had long been so great, as to insure that they came in earlier under another category. Since paints were not listed, the only designation which might conceal them was "bar and *other* lead,"

[2] 19 Congress, 1 Session, *Senate Documents*, no. 45 (serial no. 126), p. 18. See report of Lieutenant Martin Thomas.

the totals of which are given in the table. The drastic decrease in the quantity of this item imported after 1804, together with the generous figures for white and red lead, indicates the proportion these preparations formerly held to total lead imports.

The earliest New England houses were, of course, innocent of color decoration, save for the patina produced by weathering, though many of them are said to have had a coating of clay stucco over the clapboards (*clay* boards). This was in harmony with English usage as hundreds of survivals of seventeenth century "timber and plaster" houses proclaim. The custom of painting houses is believed to have begun in New England about the year 1734.[3] The improvement in homes, however, was so rapid and continuous during the eighteenth century, that a single generation changed to the eye the face of the country. The tradition of the white painted towns and villages dates from the middle of that century. By 1767 the use of the lead paints had become so popular that the British government hoped to derive a considerable revenue from the colonies by levying a duty upon them, for the Townshend Act, one of the commonly assigned causes of the Revolution, listed as dutiable at colonial ports, "glass, red and white lead, painter's colors, paper, and tea." What happened when the duties were withdrawn on the first four articles and retained on the tea is joyously relearned by every new generation of American school children.

At the Revolution such houses in the towns as were built of wood were painted either white or light yellow, farm houses as yet often being painted red. But Tim-

[3] William B. Weeden, *Economic and Social History of New England 1620-1789* (Boston, 1890), ii, 531. Also Fiske Kimball, *Domestic Architecture of the American Colonies and of the Early Republic* (New York, 1922), 136.

othy Dwight, writing about 1810, quotes with high approval a general statement about architecture contained in John Lambert's *Travels*,[4] published in 1810. Lambert's description is so definite and so detailed as to constitute an admirable summary. He says: "Throughout the states of Connecticut, Massachusetts and New York, a remarkably neat, and indeed elegant style of architecture and decoration seems to pervade all the buildings in the towns and villages; and I understand is more or less prevalent in the Northern and Middle States. The houses in the small towns and villages are mostly built of wood, generally one or two stories above the ground floor; the sides are neatly clapboarded and painted white; the sloping roofs are covered with shingles and painted a slate colour; and with sash windows, green venetian shades outside, neat white railings and steps, have a pretty effect. Sometimes the entrance is ornamented with a portico. The churches . . . are constructed of the same materials, painted white, and frequently decorated like the houses with sash windows and green venetian shades." Such "neatly painted" churches in 1796 were seen "everywhere" in the vicinity of Boston by Rochefoucault de Liancourt, also by Dwight himself, and many other reputable witnesses. Not one village in a hundred, Dwight declared, had in it a single log house. All were tidy frame structures, standing usually in a generous lawn, with shrubs and trees, a garden and small orchard, all enclosed by the fashionable white picket fence.

Boston, and the other cities, with an eye to protection against fires, enforced regulations requiring brick or stone construction; and that continued to be the prac-

[4] Dwight, *Travels in New England and New York* (New Haven, 1822), iv, 268.

tice as America spread westward. At the frontier, or in backward neighborhoods, log houses supplied the basic requirements of warmth and shelter. These, of course, were unpainted though often whitewashed both within and without. Brick and stone structures possessed natural colors, so far as the outer walls were concerned. The decorative schemes of the Adamite builders, however, called for the painting of all woodwork, which of course levied drafts upon lead colors, though Venetian green, Spanish brown, the ochers, and a variety of other materials came into popular use for interior and exterior finishing.

Eastern Pennsylvania built mainly of native stone, but as population spread through northern New York, the white houses of Yankeeland, frequently more imposing than their prototypes in New England, appeared in the towns, villages, and upon the large, prosperous farms as well. Captain Basil Hall, an English traveler of 1827, pictures Rochester on the Genesee River, sketched with *camera lucida.* In the small group of houses focused upon are two, standing prominently in the foreground, which are decorated with Greek porticos.[5] Very appropriately, the industrial census which this writer appends to his account of Rochester, shows the presence there at that time of twenty-six painters.[6]

In the "backwoods" of America a few years' development was apt to witness the change from the shelter of logs to the neat framed and weatherboarded houses, painted without, both for appearance sake and for the protection of the wood. When Henry M. Brackenridge passed down the Ohio in 1810, he stopped at Gallipolis where ten years earlier he had been domiciled

[5] *Forty Etchings* (London, 1829), plate x.

[6] *Travels in North America* (Edinburgh, 1829), i, 155.

with the family of Dr. Saugrain in a rude log house, the only type then found in the village. He found the place a smart American river town, *painted white.*[7] Hall found such villages in the coast region of Georgia; Isaac Weld, thirty years earlier, had observed that the planters of the Northern Neck, in Virginia, were building almost exclusively of wood, and of course, painting their houses white. Kentucky and Tennessee planters did the same particularly throughout the blue-grass region.

If the Greek style really became as popular after the revival fathered by Jefferson as architectural historians believe,[8] then it follows that thousands of pillared and porticoed houses were erected, North and South, between 1830 and 1860. A Greek front in other than a white or cream-colored dress would have been grotesque. For painting these houses many hundred tons of white lead and linseed oil were required every year. Bridges were often painted also, and ships, boats, and steamboats almost without exception.

Save in periods of war or financial depression the process of building new structures and of renovating old, harmonized with the rate of advance into new settlements. From one point of view, the story of American expansion is the history of building new houses and barns, fences, bridges, boats, churches, schoolhouses, stores; repairing, painting, and repainting. The movement of white lead imports reflects this situation with considerable accuracy. For example, the year 1816, is noted as one of the great years in the history of American expansion, both agriculturally and industrially.

[7] *Recollections of Persons and Places in the West* (Philadelphia, copyright 1834), 217, 221.

[8] Cf. Fiske Kimball, *American Architecture* (New York, 1928), chap. viii.

That year we imported nearly 8,000,000 pounds, or 4,000 tons, of white lead to supplement our domestic production of that article.

The manufacture of white lead in America seems to have been begun, on a commercial scale, by Samuel Wetherill of Philadelphia soon after the adoption of the national constitution.[9] For some years Philadelphia enjoyed a monopoly in that line as she did also in the manufacture of printer's type. By 1825, however, the white lead factories of New York, Brooklyn, New Jersey, supplemented by smaller establishments at Pittsburgh and Cincinnati, competed for the trade. In the early 1840's extensive plants were erected at Buffalo where lead from the northern Mississippi mines was unloaded from the lake schooners and steamers preparatory to being shipped east through the Erie Canal. By intercepting the shipment at that transfer point, the Buffalo manufacturers effected a distinct economy over eastern plants, a second advantage being the presence in the city of extensive flax mills where the linseed oil with which the lead was mixed could be procured at the cheapest rates. The aggregate value of the production of 36 American factories in 1860 amounted to $5,380,347. In that year our country imported 1,508,769 pounds of white lead, exporting a mere 7,000 pounds. The imports were valued at nearly $100,000 and since an ad valorem duty was collected in those years, the estimate can confidently be regarded as too low rather than too high. Adding the duty, 15 per cent, it would, however, amount to almost 9 cents per pound. Assuming that the American product was worth in market 10 cents per pound, the total value given would represent

[9] J. Leander Bishop, *A History of American Manufactures* (Philadelphia, 1868), i, 407.

the stupendous aggregate of nearly 54,000,000 pounds, or 27,000 tons. This shows that our people were spreading a lot of paint.

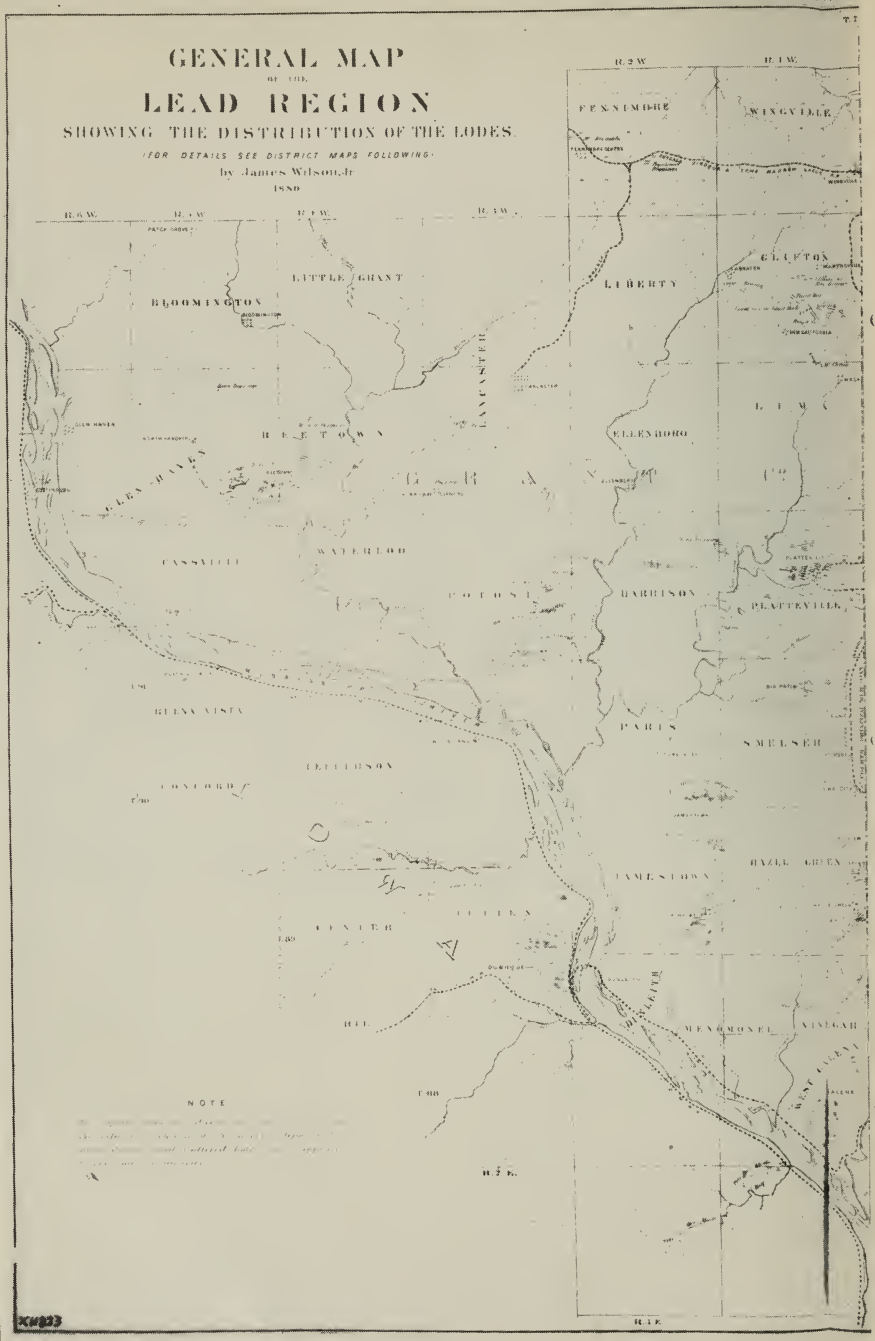
The metal out of which was manufactured not only this worthy product, but also the requisite shot, pipes, sheeting, types, and the hundred other articles in common use which were made from lead, was produced in most generous measure precisely from the district in Wisconsin which we call the "Lead Region," together with the adjacent portions of Iowa and Illinois. Already in 1840, when the aggregate production of lead in the United States was given as 31,240,000 pounds, the territory of Wisconsin was credited in the census with 15,130,000 pounds. At the same time Illinois produced 8,755,000 and Missouri 5,295,000 pounds, which give a total for the three of 29,180,000, or 93 per cent of the nation's output.

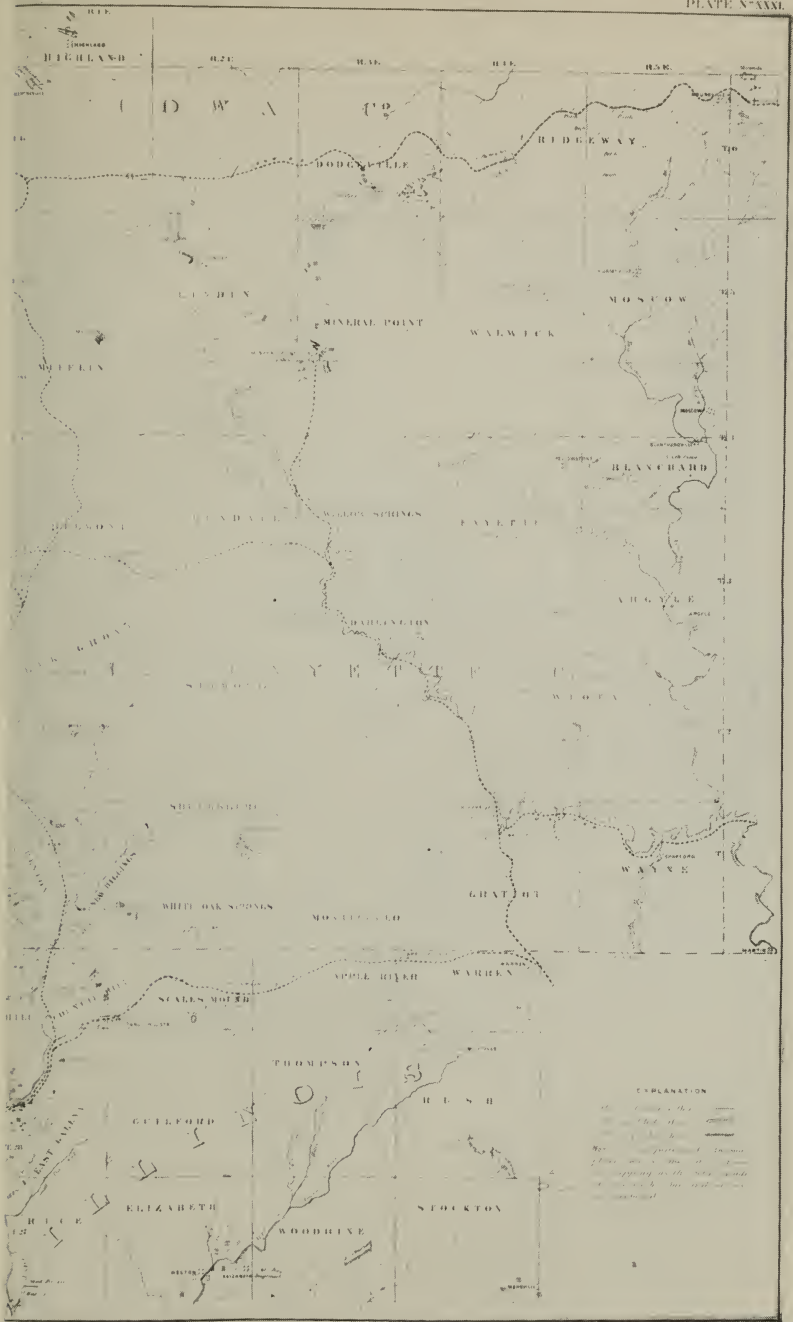
CHAPTER II

A MINING AND FARMING AREA

THE typical mining region is an otherwise waste or desert land, mountainous, infertile, ill-watered, or so gashed and rumpled as to afford no temptations to the husbandman. The lead region of Wisconsin contradicts world experience in combining almost ideal farming conditions with a fruitful mining opportunity. It is for this reason that the three counties comprised in it have been able to play so important a rôle in the history of the state.

The lead counties occupy the southwestern corner of the state. They are bounded north by Wisconsin River, west by the Mississippi, south by Illinois, and east by the counties of Green and Dane, into both of which the mineral deposits extend, giving them a relationship to the lead region which is more intimate than mere contiguity implies. The three counties embrace the equivalent of about seventy townships, in 2,200 square miles of which the rocks are said to be lead-bearing. The deposits extend beyond the state boundary south and west. Such a district is a triangle of land in Illinois centering on Galena, and bounded east and south by the escarpment of Niagara limestone, while a narrow strip in Iowa, including the Dubuque mines, is similarly terminated by the range of Niagara limestone hills paralleling the river. However, about 90 per cent of the area of the Upper Mississippi lead deposits is in the Wisconsin field.


WISCONSIN GEOLO
GENERAL MAP
OF THE
LEAD REGION
SHOWING THE DISTRIBUTION OF THE LODES.
(FOR DETAILS SEE DISTRICT MAPS FOLLOWING)
by James Wilson, Jr
1880
R. 2 W.
R. 1 W.
R. 6 W.
R. 5 W.
R. 4 W.
R. 3 W.
FENNIMORE
WINGVILLE
LITTLE GRANT
BLOOMINGTON
LIBERTY
GLIFTON
LANCASTER
BEETOWN
ELLENBORO
GLEN HAVEN
WATERLOO
CASSVILLE
POTOSI
HARRISON
PLATTEVILLE
GLENA VISTA
PARIS
SMELSER
TELLIMSON
CONCORD
JAMESTOWN
HAZEL GREEN
CENTER
MENOMONEE
VINEGAR
NOTE
R. 2 E.
R. 1 E.


HIGHLAND
DODGEVILLE
RIDGEWAY
MINERAL POINT
WALWICK
MOSCOW
BLANCHARD
WILLOW SPRINGS
FAYETTE
ARGYLE
DARLINGTON
WIOTA
WAYNE
GRATIOT
WHITE OAK SPRINGS
APPLE RIVER
WARREN
SCALES MOUND
THOMPSON
RUSH
GUILFORD
ELIZABETH
STOCKTON
WOODBINE
EXPLANATION

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The Niagara escarpment which extends in a picturesque, irregular line into eastern Iowa and northern Illinois, stretches in a similar manner quite across eastern Wisconsin from the Illinois line almost due north, skirting the east shore of Lake Winnebago and the south shore of Green Bay. Thus it flanks the lead region on three sides without at any point penetrating it. Yet there is the best proof that this rock layer, a stratum of perhaps 150 feet in thickness, did at one time cover the entire area; for the mounds which stand like sentinels at Sinsinawa, Belmont, Platteville, and Blue Mounds are all capped with the Niagara limestone, in the last case to a depth of 100 feet or more. Geologists are convinced that these mound caps are the accidentally preserved fragments of a dense sheet of this rock which once was spread over the entire mineral region but which, in the course of ages, has been eroded away, together with portions of the strata lying beneath it. At these few points the rock must have been exceptionally resistant, which saved it from the fate of the stratum as a whole and also protected whatever lay immediately below. That included about 40 feet of Maquoketa shale, a soft rock layer that intervenes between the Niagara and the Galena-Trenton limestone, which is the formation containing the lead deposits.

Everywhere else over the three counties the exposed rocks belong to series lower than the Niagara and these shales. The greater part of the surface is directly underlain by the Galena-Trenton, but where erosion has gone further, as in the river valleys, the rock sub-surface is the St. Peters sandstone, the Magnesian limestone, or the Potsdam sandstone. This last, a sheet 700-1,000 feet thick, is the lowest rock exposed in the area.

All of the strata just named were laid down in the sea in remote geologic periods when the entire region was submerged. The Potsdam sandstone being the lowest of these formations is the oldest—laid down first. Next, was formed, of course, under quite different marine conditions, the Lower Magnesian limestone. This is of varying thickness ranging from 40 to 250 feet. It is unconformable, as the geologists say, meaning that its upper layers are broken, which is explained by assuming that after the stratum had been formed at the sea bottom, it was elevated and subjected to the forces of erosion, then submerged again, other strata being laid down over it. The next in order being the St. Peters sandstone, it also is necessarily of uneven thickness, since it fills inequalities in the Magnesian. Where it is exposed in the lead region, the St. Peters varies in thickness from 70 to 100 feet. After this silicious stratum had been formed, another change must have occurred in the conditions of land building, for the next stratum is limestone again—a heavy mass of rock somewhat varied in character at different depths, and ranging in thickness from 165 to 375 feet. The lower 40-125 feet of this mass is called *Trenton* or *Platteville* limestone, the upper 125-250 feet *Galena.* Over much of the three lead counties the combined Galena-Trenton (or Galena-Platteville) rock has been eroded or weathered down to a thin sheet, and in the northern portion it disappears entirely, being all eroded away on the drainage slope descending to the Wisconsin where first the St. Peters, then the Magnesian limestone, and finally the Potsdam appear directly under the mantle of surface soil.

The geological arrangement just described has been likened to tiling on a roof. If we imagine the lower, primitive rocks of the earth as constituting the structure

to be covered, the first great sheet laid over it was the Potsdam sandstone. This was somewhat beveled down at the Wisconsin and Mississippi River margins which we may call the eaves. Another layer was applied, the Magnesian limestone, but this did not come down to the eaves. It was beveled away so as to leave an exposed belt of Potsdam. Then came the St. Peters, which was so spread as to leave exposed a band of the Magnesian. Finally, the Galena-Platteville layer, also beginning at the south edge, like the rest, stopped short northward leaving exposed a margin of the St. Peters. The knobs of Niagara and shale represented in the mounds may be disregarded in this somewhat fanciful comparison, or they may be looked upon as welts upon the upper range of tiles.

Physiographically, the lead region as a whole embraces two unequal slopes: a longer and gentler one from the south line of the state to the height of land known for a hundred years as the Military Ridge, which extends on an east and west line through the district; and a short, precipitous one from the crest of the same ridge to the Wisconsin and Mississippi. The first slope is essentially a plain, with rivers coursing southward through it, the second a much eroded region of bluffs and deep valleys with some plain land on the tops of the hills separating the valleys. The block of territory as a whole is an upland whose edges, where they front the two great rivers flowing through trenches from 300 to 500 feet deep, are worn into fantastic shapes of bluff, cliff, and ravine, with frequent stream openings leading back into the land.

One who traverses the region by the military road (State Highway 18) will be able, on a clear day, to gaze down the wildly wooded valleys which break away from

the Galena-Trenton escarpment northward to the mighty trench of the Wisconsin and, from the western section, to the Mississippi also. The upper sections of these valleys are what give them their mountainous appearance. The lower valleys have a gentle gradient, their floors are broad and flat, the streams meandering sluggishly through them. Those sections are eroded into the soft rock of the Potsdam sand formation. In the upper sections erosion was influenced by the more resistant Trenton and Lower Magnesian limestones. This gives a sharp contour to the side valleys and ravines, which, being ill adapted for farming are usually wooded, and gives a rapid, even torrential character to many of the streams.

Looking off to the south, our traveler will behold a great plain with the Platte Mounds and Sinsinawa Mound rising from its surface; with Sugar River, the widely branched Pecatonica, Fever River, the Platte, the Grant, and Little Grant rivers flowing through it without robbing it of its plain or prairie character. All of the last named streams descend to the Mississippi while Black Earth Creek, Helena Creek, Mill Creek, Otter Creek, Underwood Creek, Blue River, Sanders Creek, Crooked Creek, Green River, and Blake Creek, with many minor streamlets, discharge their waters into the Wisconsin. The north-flowing streams are more numerous; the south-flowing longer and more branched, thus emphasizing the contrast in their watersheds. There are no lakes on either slope.

What has just been said would indicate that the "roof" is not a flat rock cover slightly tilted but a true "hip-roof" with slopes of unequal length and hence unequal steepness, like many of the older New England houses. That is true partly because there is a secondary

covering of weathered material or soil above the solid rock cover. The latter shows a gentle tilting toward the Wisconsin but the soft material above it—like a load of marsh grass piled upon a nearly flat covering of boards—affords drainage in both directions. In part, also, the result is due to a somewhat undulating character imparted to the upper rock strata by stresses tending to fold them. These undulations run generally on an east and west axis, giving emphasis to the north and south slopes. The earth forces causing them may well have produced the joints, cracks, and crevices in which the mineral deposits are chiefly found.

The surface rock or soil, throughout the lead-bearing area, is weathered limestone made on the spot by the disintegrating of the Niagara together with a lesser or greater depth of Galena-Trenton. The soil covering has been estimated to be, on the average, 7 to 10 feet deep. To produce this would require the weathering down of more than 100 feet of solid rock, the soluble parts which constitute more than 90 per cent of the mass being carried away by the percolating or eroding waters. Over portions of the area deposits of loess occur. These are wind-borne materials derived from distant land surfaces, which were deposited in the form of dust and which sometimes constitute the sub-soil. As such, some soil experts believe it has been responsible for the tall grass association which, in its turn, has produced the black prairie soil (Marshall silt loam) so conspicuous over portions of this area. The region being wholly unglaciated, no bowlders, gravel, or other drift material are found upon it.

The clayey soils resulting from the decomposition of the limestones constitute a fine, durable basis for farming. Where deeper erosion uncovered the St.

Peters and still deeper the Potsdam below the Magnesian limestone, the soils are light and infertile, except in cases where material from eroded limestone was spread over or intermingled with them. Thus the valley floor of the Wisconsin is mostly sand, the Mississippi, in this section likewise, and also the lower courses of many of the small valleys debouching into these. Higher up the valleys where the Magnesian limestone is exposed, the soil is good unless modified by outwash from the St. Peters.

That portion of the lead region which lies high, dry, and comparatively flat, where it is mostly bare of forest covering, has been known as "the prairie." It is a true upland whose deficiencies in surface water supplies had to be made good by the pioneer farmers, first by hauling water, and then by drilling wells to depths of from 150 to 400 feet, installing pumps and windmills or gas engines. The balance divides into wooded plains, hill country or ridges, and valley land.

The prairie, the wooded plain land, and the broader ridges have much in common; all are desirable farming locations, while the narrow ridges, on account of their steepness, thinness of soil, and tendency to gully are the last sites to be chosen by farmers. The valleys vary from the choicest sites, where the soil is good and the breadth of cultivated land ample, to inferior locations in the narrow parts where cultivation is forced to impinge upon the steep lower slopes of the bordering hillsides. Hamlin Garland quotes his father as saying, when about to leave such a location in La Crosse County, that those whose farms lay on the broad level floor of the valley had no reason to seek new homes, but those like himself who were forced to cultivate steep hillsides had no recourse but to get away. The remark

has a special applicability to much land in the three counties we are studying. The prairie and plains became the region of comparatively large farms, with heavy crops first of wheat and later of corn, and a live stock economy which for many years centered upon pork, beef, and horses, but which recently has seen a large development of dairying, though hogs and beef cattle are still prominent. The rocky, precipitous faces of the bluffs are wholly uncultivable and when included, with some flat land on their tops, in farms, they give rise to the pleasantry that their owners can "cultivate the land on three sides." These slopes afford a little grass during the wettest part of summer, but their chief value is for growing timber of which they have much more now than they had when the country was first settled. Indian fires had practically kept them denuded of trees except in the deeper, more protected ravines, but during the era of settlement, fires being controlled, the timber has had a chance to grow which has resulted in covering many of the bluffs with valuable oak, hickory, birch, and to some extent cedar groves.

The broken country of the north-trending slope is well watered in the low portions with creeks, "branches," and springs. The ridges and the prairie (together with other high plain land), have usually depended on distant springs, on deep wells, or on cisterns. All of the streams, as a rule, supplied sites for rural sawmills and gristmills though there are no extensively developed water powers in the interior of the district. The so-called "Big Spring" in the town of Castle Rock, Grant County, flows out of a rocky cave in the hillside with volume and force which practically make it a mill stream at its head. It is probably the most remarkable spring in the three counties, one of the most wonderful in the state, and

a principal source of the Fennimore branch of Blue River. The Wisconsin has a great power site at Prairie du Sac, above the lead region, and opportunities for other dams are supposed to exist in the reach of river between that point and Prairie du Chien. Since it is no longer navigable, destiny probably has in store for the river a great development of its power resources.

As a rule, the tillable lands in these three counties presented to the farmer no serious problem of clearing. Some scattering groves of heavy timber were found in the south, but a much larger area was covered thinly with stunted oak, while the prairies were numerous and in the aggregate extensive. The north slope, as stated above, has grown most of its timber since settlement put an end to the annual fires, though some protected areas both in the river valleys and on the uplands had good timber when the pioneers first came. Local descriptive names like Hickory Flat, Oak Ridge, Walnut Grove, and Hickory Ridge indicate the scattered heavy timber tracts; and the fact that valley farmers of the primitive period, say prior to 1875, were often forced to draw their firewood from such areas shows the tardiness of forest growth on the slopes of the bluffs flanking the valley farms. The mining region proper was dotted with pleasant "groves," whose importance to the mining and smelting business was crucial. Examples are Gratiot's (Gratch′ot's) Grove, Meeker's Grove, Walnut Grove, Patch Grove, Linden Grove, and Dodge's Grove.

CHAPTER III

BEGINNINGS OF LEAD MINING

NOTWITHSTANDING the favorable opportunity for agriculture, the pioneer industry in the lead counties was not farming but mining. The mineral in the gashes of the Galena rock stratum was the magnet which drew the first large body of settlers to Wisconsin, the economic cause of the organization of the new territory, and the basis of its first bloom of prosperity.

For the United States as a whole, however, the lead region had a tardy development. The sources of a domestic lead supply in the young American republic were at first very precarious. Prior to the Revolution a lead mine at Southampton, Massachusetts, had been operated for a few years; there was another in Dutchess County, New York, and insignificant ones in several other places. But the aggregate production from the diggings was so meager that, in order to obtain lead for bullets, the revolutionists were forced to melt down the frames of their leaded windows,[1] much of their pewter, and even good King George's statue! At later times some valuable deposits were opened in western New York, New Hampshire, Pennsylvania, Virginia, and North Carolina. But taken together these afforded but scant promise of freeing the new nation from its dependence on England for a supply of that very necessary metal.

[1] H. D. Eberlein, *The Architecture of Colonial America* (Boston, 1915), 249.

Reference has been made to the productiveness of the lead mines of Louisiana.[2] The French lords of that hopeful empire were keenly interested in exploiting its mineral resources and between the years 1720 and 1740 they employed an official prospector named Philippe François Renault to make a systematic search, especially for the more valuable metals. Establishing a base near Kaskaskia on the Mississippi in the present state of Illinois, Renault, aided by a mining expert named La Motte, and a large group of practical miners, set to work in good earnest. He ranged up and down the great river on both sides, but his best results were secured on the west side, nearly opposite Kaskaskia, and some fifty miles from the Mississippi.

In the Missouri counties of Washington, St. Genevieve, Jefferson, and Madison, especially the first, embraced between the headwaters of the Meramec, St. Francis, and Gasconade rivers, is an area of hilly or rolling country comprising more than 3,000 square miles which was found to be generally lead-bearing. The French, during the twenty years or so of their activity, established and worked several mines in that region, the most historic being Mine La Motte which appears on the eighteenth century maps of Louisiana.[3] When the country was transferred to the Spanish, 1762, efforts were made to reopen the long disused French mines, and a number of new diggings were begun in the same neighborhood. Their most important new lead was at Mine à Burton, so named for the discoverer, a French adventurer and soldier who is supposed to have participated in the fight against Braddock. In 1819 it

[2] *Ante*, p. 3.

[3] See Lieutenant Ross's map, 1765-75, as reproduced in Arthur Winslow, "The Mapping of Missouri," in St. Louis Academy of Science *Transactions*, vi, 72.

was said the mine had been known "about forty years," though Burton himself (then 106 years old) could not remember when he found it.[4]

Jefferson in *Notes on the State of Virginia*, 1783, reports what appears to have been common knowledge at the time, that practically all the lead produced in the Mississippi country was mined west of Kaskaskia. The center of the activity was St. Genevieve, a French village situated on the west bank, nearly opposite the ancient Illinois town. The people of St. Genevieve, for the most part peasants, cultivated the "great field," an immensely fertile plain along the river below the town, worked a little at the usual variety of trades and small businesses, but to eke out an existence sufficiently precarious at best, they migrated after harvest to the mines some thirty to fifty miles west, and spent about four months taking out mineral. This they carted home to sell in order to purchase the supplies requiring a cash outlay, for lead was as marketable as furs. Of course, the mining under these conditions was a very crude process.

In the year 1798 Moses Austin, who later with his son Stephen F. colonized Texas, began operations at Mine à Burton and a continuation of that mine which he called "Potosi," under a lease from the Spanish authorities at New Orleans. Austin was an expert at the business, having worked the lead mines in Wythe County, Virginia, for some years and apparently having had some experience elsewhere.[5] He modernized lead mining in the area, erecting a permanent reverberatory furnace, a shot tower, a manufactory of sheet lead;

[4] Henry R. Schoolcraft, *View of the Lead Mines of Missouri* (New York, 1819), 48-49.

[5] Eugene C. Barker, *The Life of Stephen F. Austin* (Dallas, 1925), especially chaps. i and ii.

also grist and sawmills, and other accessory works. Austin promoted the development in the course of a couple of decades, of a considerable village which became the county seat of Washington County. Other Americans pressed in, new prospects were opened, and before the transfer of the country to the United States five important mines were being worked, to say nothing of a host of small ones.

President Jefferson was keenly interested in the possibility of securing a supply of lead for the United States at large from the Louisiana country, and it was his agent Meriwether Lewis who, before setting out on his great expedition to the mouth of the Columbia, initiated the first survey of the lead mines. At Lewis's request, Captain Amos Stoddard, the resident governor at St. Louis, sought the necessary information from Moses Austin, who accordingly wrote an extended report for the president's benefit.[6] In it Mr. Austin said that in the years from 1798 to 1803 about 50 persons, working four months a year, commonly took out from 550,000 to 600,000 pounds of lead, all in the neighborhood in which his mine was located. By working all year, except during the spring rains, that amount could be increased to 1,500,000 or 1,600,000 pounds—and he adds: "From the extent of the mines one thousand men might be employed to equal advantage." He describes the earlier mining as a kind of vacation employment of the people of St. Genevieve, who would go to the mines in August, dig enough metal to pay for their year's supplies, and retire to their homes about the end of December. Austin expressed the opinion that no mining region in the world could equal this, showing that there

[6] American State Papers, *Public Lands*, ed. Duff Green (Washington, 1834), i, 188-191.

were certain regions with which he lacked familiarity. The president, in transmitting his report to Congress, says: "The lead mines in that territory offer so rich a supply of that metal as to merit attention. The report now communicated will inform you of their state, and of the necessity of immediate inquiry into their occupation and titles."

The first law passed on the subject was the act of March 2, 1805 which provided for the appointment of agents and commissioners to ascertain the state of titles to lead mines in Louisiana and to report, with recommendations, to the secretary of the treasury. This was followed by the leasing law of 1807.[7] Thereafter congressional interest was undemonstrative until in 1823 when the House of Representatives, repeating rather sharply an earlier request, called upon the president for information as to how the law of 1807 had been carried out. Congress wanted to know about the probable value of each of the salt springs, and the lead and copper mines, "the extent to which they had been worked; . . . the advantages and proximity of each to navigable waters; the origin, nature, and extent of any claims made to any of them by individuals or companies; etc."

This resolution brought a report, submitted for the president by Secretary of War Calhoun, whose Department of Ordnance had been given supervision of the lead mines in November, 1821.[8] But the commissioner of the General Land Office contributed the principal data contained in it, particularly on the subject of the Louisiana (now Missouri) mines. The commissioner had derived from the surveyor-general a map showing

[7] United States *Statutes at Large*, ii, 448.

[8] 18 Cong., 1 Sess., *House Documents*, no. 128 (serial no. 98), contains the entire report.

the location of those mines—which unfortunately is not printed in the report—and from the same source a list of the townships where mineral signs had been found by the surveyors. He also reported the findings of the commission appointed as early as 1806 to examine claims and recommend their confirmation or non-confirmation. But the picture of the mining activities which we obtain from the report is derived at secondhand from a personal survey of the Missouri region by Henry R. Schoolcraft, whose *View of the Lead Mines of Missouri*[9] is a valuable document.

Mr. Schoolcraft rode and walked all over the district in 1818, and spent much time at Austin's mines which were still central. He found that considerable new ground had been exploited since 1804, resulting in the opening of an aggregate of 46 lead mines. One of these, Mine Shibboleth, which for some years was the most productive of all, yielded in 1811 about 3,125,000 pounds of lead. In the eighteen years from 1798 to 1816, Mine à Burton and Potosi diggings, both controlled by Austin, produced 9,630,000 pounds. The intensity of the business varied from year to year. Schoolcraft reported 45 mines in operation, 39 of them in Washington County, and estimated the number of men engaged in mining lead at 1,100.[10] The returns he estimated at 3,000,000 pounds per annum.

This Missouri lead region was the richest thus far exploited within the United States. Its product was carted to the Mississippi, thirty to fifty miles over wretched trails, and shipped either from St. Genevieve, which was the older port, or from Herculaneum farther up the river. At the latter place two shot towers had

[9] New York, 1819.

[10] *Ibid.*, 167.

Frontispiece of Schoolcraft's *View of the Lead Mines of Missouri*

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been erected in 1810. It soon became the principal market for the Missouri lead.

In addition to the Missouri mines just described, there were Upper Mississippi mines which had been worked from early times. These, also, were first known to the French. Nicolas Perrot, in 1690, reported the existence of a rich mine on a branch of the Mississippi and he is supposed to have built a trading post near the spot, probably for the sake of inducing the Indians to work it.[11] We do not definitely know where the Perrot mine was located, but it was probably at Dubuque and his post was opposite at East Dubuque. There is evidence that lead was also being taken out by Indians near the Wisconsin River, for in 1766 Jonathan Carver saw quantities of the metal in the Sauk village and he describes the place of origin as being in the vicinity of Blue Mounds.

Mining, indeed, may have been carried on crudely at many points in the lead region throughout the eighteenth century, as the pock-marked condition of the terrain when white miners arrived would suggest. But the principal center of Upper Mississippi mining, from 1788 to 1810, was the Dubuque mines, on the west bank of the river, nearly opposite the junction point of Illinois and Wisconsin. Julien Dubuque was a French trader who gained a powerful ascendancy over the Sauk and Fox tribes, claimants of the upper lead-bearing country. In 1788 he obtained from the council of the tribes a permit to dig lead in a district which included the present city of Dubuque. He was careful to secure from the Spanish governor of Louisiana a confirmation

[11] Louise Phelps Kellogg, *The French Régime in Wisconsin and the Northwest* (Madison, 1925), 359-363. R. G. Thwaites, "Notes on Early Lead Mining in the Fever River Region," *Wisconsin Historical Collections*, xiii, 271-292. M. M. Hoffmann, *Antique Dubuque* (Dubuque, 1930), 33.

of the grant, but his title was considered imperfect by the United States government, so Dubuque's claim to twenty-one square leagues along the Mississippi was set aside and the land finally became a part of the public domain through Indian cession in 1832.

Dubuque was successful in commanding the labor of Indians, which encouraged him to open mine after mine until he was doing a very large business spread over a goodly share of the lead region; for like some of the later lumbermen in the pineries, he did not confine himself to the home "quarter section."

His lead was shipped to St. Louis in pirogues, and his supplies brought up the river from that place. No statistics of his business are extant; in 1805 he pretended to give Captain Zebulon M. Pike an account of the annual production of his mines, saying it amounted to 20,000 to 40,000 pounds of lead, all in the form of pigs.[12] That this was a grotesque understatement is clear not only from the extent of the mining field and the number of workers, but from its output under white operation at a later period, and from the report that the Indians in 1811, the year after Dubuque's death, sold to traders about 500,000 pounds which they made in the Dubuque mines.[13] It is probable that Dubuque contributed materially to the Louisiana production totals.

While the report of 1824 advances very little or not at all our knowledge of the Missouri lead region, beyond the point where Schoolcraft's survey left it, a report of 1826 to the Senate, is of a different character. This document we owe to Lieutenant Martin Thomas,

[12] Thwaites, "Notes on Early Lead Mining," *Wis. Hist. Colls.*, xiii, 283. This article contains many historical details of the lead business at Dubuque, Galena, and in Wisconsin.

[13] H. M. Brackenridge, *Views of Louisiana* (Pittsburgh, 1814), 65.

superintendent of the western lead mines.[14] Lieutenant Thomas took up his work in Missouri in November, 1824. As a background, to show the situation on his arrival as to leased mines and squatter mines, he quotes the account given in Schoolcraft, especially the statements from Moses Austin and from the recorder of claims. These are to the effect that the government's efforts to have all claimants record their claims and to have all mines on public lands worked under leases had failed miserably. For the most part, everyone had been digging pretty much where he pleased, on public land or private. That state of things had improved and at the time of writing the "trespassers" were of the more worthless, abandoned types. Thomas had leased mines to certain prominent men, like William M. and John Perry, whose example had proved most wholesome. But he was evidently putting upon the situation the best face which the facts warranted.

Thomas describes the Missouri lead district as a tract about fifty miles square, or 2,500 square miles, with Potosi as its center. The survey had covered the whole area, the greater part had been offered for sale, and portions of this had passed into private hands. Under the law reserving mineral lands from sale, that which showed clear signs of mineralization, mostly near Potosi, could not be sold to individuals like other government land, yet the government had not prevented miners and others from squatting upon it. Besides, there were some Spanish claims, some French grants, and some American donations. The reservations had been made casually; Thomas reported a large number of additional reservations, so that the government's lead-bearing lands were much more in area than had been supposed. He

[14] 19 Cong., 1 Sess., *Senate Documents*, no. 45 (serial no. 126).

asserts also that in 1825 the number of mines was nearly double that reported in 1816 and he believed that, in view of the advantages of the government leases, prospecting thereafter would be mainly on public lands.

Mining was still, as in 1818, conducted in a crude way, with spade and shovel, windlass and tub, and the smelting was a wasteful process employing the primitive log furnace built out of the native limestone which, by a single blast of forty-eight hours was reduced to lime. The lead obtained from the ore was about 62 per cent, and the smelters paid 800 pounds of lead for every ton of ore delivered to them.

The quantity of lead which would be made in Missouri *from the leased mines*, in 1825, Thomas estimated at 1,200,000 pounds, and he believed all other mines would produce 3,000,000 pounds. In addition, the Fever River mines would make 1,000,000 pounds or a total of 5,200,000 "which," he says, "is not one-half the amount required to meet the demand of the country, estimated at 12,000,000." He thinks Missouri, since the date of Schoolcraft's survey, had made lead at the rate of 4,000,000 per annum. In 1825 the government was due to receive about $7,000 in rent lead, something it had not received at all theretofore. Common hands could earn at least $1.00 per day throughout the year as miners, many earned $2.00 to $3.00 per day, and often as much as $15 to $20 was made in a day. Smelters who shipped their lead East—and the demand was so sharp that the shot makers in the region itself were unable to buy all they needed—could clear a profit of $20 per ton on the lead they sold. Thomas estimates the number of men engaged in mining, smelting, and transporting at 2,000.

This superintendent was enthusiastic over the prospects of the leasing system, which he regarded as fully justified both theoretically and experimentally. At the moment there seemed a tendency on the part of respectable miners to secure government leases. He anticipated rapid progress under that system, saying: "We should never lose sight of the fact that it is the *surface* only which is producing such quantities of ore. A few years will fully develop the immense value of the mine country, and if it is then deemed advisable to sell it, it will certainly bring more money than at present; and, in the meantime, the Government will accumulate a large quantity of lead, sufficient for its wants for many years."

Thomas visited the Upper Mississippi mines, also, and found Dubuque's old diggings were being worked a few weeks in the year by the Sauk and Fox Indians "who derive much benefit from them in trading the ore to the white smelters." The squaws are the miners. Some of them smelt their own ore in Indian furnaces.

Thomas states that previous to the new tariff (1824), lead had been selling at Missouri depots at four cents. After the passage of the tariff bill, which raised the duty from one cent to two cents per pound, the price advanced, first to five cents, and then gradually to six and a fourth cents. To be sure, the tariff could not have been responsible for the last increment of one and a fourth cents; that was due to an advance in the world market. The price had risen everywhere. Lead was in great demand. The time, therefore, was propitious for an immense development of lead mining wherever the existence of lead-bearing lands in juxtaposition with settlements and transportation facilities afforded opportunity for it. Such opportunities the Upper Mississippi region possessed, as did also Spain. In these two widely

severed areas the next few years were destined to witness great transformations. Public acts of 1820 and 1825 in Spain set the ball in motion so that, as J. D. Whitney tells us, the production of a certain district in Andalusia became "almost fabulous in quantity, and the price of lead fell throughout Europe with great rapidity ruining many mines in England and Germany."[15] In 1827, the output of these Spanish mines was 42,000 tons, which may be compared with the production of the Wisconsin mines now to be considered.

[15] *The Metallic Wealth of the United States, Described and Compared with that of Other Countries* (Philadelphia, 1854), 375-377.

CHAPTER IV

THE RUSH TO THE LEAD MINES

THE seal had already been broken on the greatest American treasure house of lead known to that generation, namely, the Illinois-Wisconsin mines. When Jefferson wrote his *Notes on Virginia*, he was vaguely aware of the richness of the deposits in that region for he said: "The greatest [lead mines], however, known in the western country, are the Mississippi, extending from the mouth of Rock river 150 miles upwards. These are not wrought, the lead used in that country being from the banks on the Spanish side of the Mississippi, opposite to Kaskaskia."[1]

Thwaites adduced evidence to show that Dubuque exploited some of the deposits around the later Galena, and probably also some of those within the Wisconsin area, and that the mines were worked crudely by the French and for the French at earlier times.[2] When American miners entered the district, they found it perforated with ancient shallow diggings, and encountered Indians still engaged in scooping out lead ore from "near the grass roots," using stone picks, bone spades,

[1] Thomas Jefferson, *Notes on the State of Virginia*, ed. Ford (Brooklyn, 1894), 46-47. He gives on pages 45-46 an account of the lead mine in Virginia, on the Great Kanawha. Says it would employ 50 laborers to advantage but generally has 30, who "cultivate their own corn." They have produced as high as 60 tons lead per year, but generally 20 to 25 tons (40,000-50,000 pounds). Transportation was a great problem in connection with that mine which had been operated by Moses Austin before he went to Missouri.

[2] "Notes on Early Lead Mining," *Wis. Hist. Colls.*, xiii, 271-292.

wooden shovels, gun barrels for crowbars—and an occasional white man's implement. They broke up rocks by heating and pouring on cold water. The Indians, too, had left upon the earth's surface evidence of the primitive smelters used by them. These were made by digging in a hill slope a hopper-like pit two or three feet wide at the top, the sides sloping toward a point but stopping short when the bottom was still some eight inches in width. The sides of the opening were lined with flat stones while longish narrow ones were laid grate-wise above the bottom. A trench called the "eye" was dug from the lower side extending under the bottom of the hopper. This trench was filled with dry wood, brush, and other material while the hopper was filled with ore. When the fuel was fired, the ore melted down in part and the molten lead flowed through the fire trench and was caught in a tiny pool scooped out near its lower end. The lead in that form was called "plats" and each plat weighed thirty to seventy pounds.[3]

This Indian furnace which is about as complex as the modern camp-cooking device, could hardly have been invented by the aborigines. It is altogether likely that they were taught the art of smelting by Frenchmen like Perrot who were directly interested as traders in the results of Indian mining. Once learned, it was no doubt handed down from one generation to the next, like other arts, and also diffused among the tribes. When the whites began operations in the mines, their furnace was practically identical with the Indian furnaces just described, another evidence that the idea came from white miners in the first instance.

[3] William R. Smith, *The History of Wisconsin* (Madison, 1854), iii, 353-354. For other references see Kellogg, *French Régime*, 360, note 51, and Thwaites, cited above, p. 281.

It is possible that the Indians of southwestern Wisconsin dug and smelted and sold to French traders from the days of Nicolas Perrot. The wars of the eighteenth century interfered with the schemes of Renault and other Frenchmen who aimed to develop mining on a large scale; but it need not be supposed that the Indians were out of the diggings for long at a time.

The beginnings of mining by Americans in this district, which were so carefully traced by Thwaites, need not be described here in detail. From the year 1816, when Colonel George Davenport, Indian trader, shipped the first flatboat load of lead to St. Louis, the Fever River (or Galena) mines may be said to have been definitely known. The reservation of five miles square to be selected by the president, in the Indian treaty of 1816, was designed to cover the mining area when its boundaries should be accurately defined. Jesse W. Shull, another Indian trader, was admitted to the Galena area in 1819, through the special favor of the Sauk and Fox Indians. François Bouthillier, A. P. Van Metre (also written Van Matre, Van Meter), and Dr. Samuel C. Muir were other Americans who, related to the Fox Indians through their wives, were permitted to carry on mining near Fever River. Colonel James Johnson, of Kentucky, obtained the privilege by virtue of his command of a military force. The Buck Lead, just above Galena, was already yielding to Indian workers its fabulous returns, the "big nugget" raised that year being one of the most famous finds of the entire lead-mining history.

Leasing, though contemplated as a general principle by the law of 1807, was not begun in this region till the year 1822, at which time two leases were granted to Kentuckians who possibly failed to take advantage of

them. But in the same year Colonel James Johnson took out a lease and immediately systemized the mining he had been carrying on desultorily for about three years. Johnson employed both white miners, equipped with the best tools and implements, and negro slaves. He was protected by a military guard. This was the beginning of large scale mining in the Galena area.

Lead mining becoming more profitable soon thereafter, on account of the artificial and natural bulling of the market, a kind of rush to the lead region ensued. Martin Thomas, in 1825, found mines not only on Fever River, but on Apple River, Small Pox River, and at Sinsinawa as well. On his first visit, in March 1825, there were about 30 miners at Fever River, but he was convinced the quantity of lead to be made in 1826 would be double the amount, 1,000,000 pounds, estimated to have been taken out in 1825. Some of the veins were so rich that smelters paid from $500 to $3,000 for the right to work them. A common laborer encountered by him on the boat, after working less than two months, made a discovery which he sold for $1,300.

But this represented only the initial movement. In his report dated at St. Louis, September 30, 1826, Thomas gives a record of the number of miners engaged in the Fever River mines at stated intervals, beginning with July 1, 1825. At that date there were 100; December 31, 1825, there were 151; March 31, 1826, 194; June 30, 406; and on August 31, 453.[4] The numbers were still on the increase at the date of the report. Already the actual working force in these so-called "Fever River mines" was more than a third as great as that employed in the Missouri mines, though the total number of participants, mostly part-time, in lead mining in

[4] 19 Cong., 2 Sess., *House Executive Documents*, no. 7 (serial no. 149).

Missouri was more than four times as great. The Upper Mississippi mines in 1826 are credited with 428 tons or 856,000 pounds of lead, the Missouri mines with 1,343 tons, or 2,686,000 pounds. But the very next year the tables were turned, the Upper mines making 2,313 tons, the Missouri mines 1,614. In other words, the enormous growth in lead mining, in 1827, came in our region.[5]

According to the figures of the Ordnance Bureau, the Fever River district in 1827 produced 5,182,180 pounds, the next year 11,105,810 pounds, and in 1829, 13,343,150 pounds. Missouri public mines during the same three-year period have a record of 910,380; 1,205,920; and 1,198,160.[6] The next year (1830), there was a falling off to 8,323,989 pounds in our area, while the public mines in Missouri produced only 8,060 pounds, or virtually none. The case stands otherwise when we include an estimate of the lead made in Missouri from other than public mines. Whitney summarizes the matter thus:

	Upper Mississippi	Missouri
1827	2,313 tons	1,614 tons
1828	4,958 "	2,857 "
1829	5,957 "	1,867 "
1830	5,331 "	1,832 "
1831	5,369 "	1,277 "
1832	5,401 "	3,487 "
1833	6,068 "	3,699 "
1834	7,699 "	2,853 "
1835	8,469 "	3,227 "
1836	11,390 "	2,826 "

This, however, makes it clear that the Upper Mississippi mines had forged ahead of those in Missouri;

[5] Figures are from Josiah D. Whitney, *The Metallic Wealth of the United States, Described and Compared with that of Other Countries*, 421.

[6] 21 Cong., 1 Sess., *Senate Documents*, no. 1 (serial no. 192).

that the area in Wisconsin, Illinois, and Iowa was *par excellence* the "Lead Region" of the United States, as Jefferson half a century earlier seems to have thought, though Missouri was destined to come back nobly in our own period.

The special advantages supposed to be enjoyed by the Upper mines in the competition with Missouri, were two—facilities for transportation, and a superior opportunity for producing food. The Missouri mines, as already stated, were separated from the river by a stretch of from thirty to fifty miles of very bad road. The means of conveyance had always been carts. So serious was the problem of transportation that Martin Thomas, in 1826, strongly recommended the building of a government road from the Mississippi to the Potosi mines. Thomas also urged, for the benefit of the up river mines, the improvement of navigation by the blasting out of a channel over the Keokuk and Rock Island rapids which would make river transportation more economical in the season of low water, but the rapids could always be run during the higher stages of the river. The immense possibilities of the development in the Upper Mississippi country, he thought, justified the expenditure of the estimated $20,000 to $30,000 for the purpose. But, even without that desirable improvement, all lead mined in the Fever River district, in Dubuque's mines, and along the lower courses of streams flowing into both the Mississippi and Rock rivers, as well as the Wisconsin, could be sent to market by water transport. And ordinarily there was only a short land haul through an open country, over good natural roads, passable by large wagons drawn by any desired number of oxen.

Schoolcraft, who passed over the lead region in going from Galena to Fort Winnebago in 1831, gives us

a glowing description of the country. He thinks that its reputation as a lead-bearing country aided in suppressing the facts about its agricultural character. "I know not," he says, "how else to account for the light which has suddenly burst upon us from this bank of the Mississippi, and which has at once proved it to be as valuable for the purposes of agriculture as for those of mining, and as sylvan in its appearance as if it were not fringed, as it were, with rocks, and lying at a great elevation above the water. This elevation is so considerable as to permit a lively descent in the streams, forming numerous mill-seats. The surface of the country is not, however, broken but may be compared to the heavy and lazy-rolling waves of the sea after a tempest. These wave-like plains are often destitute of trees, except a few scattering ones, but present to the eye an almost boundless field of native herbage. Groves of oak sometimes diversify those native meadows, or cover the ridges which bound them. Very rarely does any rock appear above the surface. The highest elevations, the Platte Mounds and the Blue Mound, are covered with soil and with trees. Numerous brooks of limpid water traverse the plains, and find their way either into the Wisconsin, Rock River, or the Mississippi. The common deer is still in possession of its favorite haunts; and the traveller is very often startled by flocks of the prairie-hen rising up in his path. The surface soil is a rich black alluvion; it yields abundant crops of corn and, so far as they have been tried, all the cereal gramina. I have never, either in the West or out of the West, seen a richer soil, or more stately fields of corn and oats, than upon one of the plateaux of the Blue Mound.

"Such is the country which appears to be richer in ores of lead than any other mineral district in the world

—which yielded forty millions of pounds in seven years—produced a single lump of ore of two thousand cubic feet—and appears adequate to supply almost any amount of this article that the demands of commerce require."[7]

One has but to compare the above with the same writer's description of the Missouri lead-mine country to realize the vast difference agriculturally in favor of our own lead region, notwithstanding his use of certain identical phrases.[8] He had written of the Missouri area: "The general aspect of the country is sterile, though not mountainous . . . . The soil is a reddish coloured clay, stiff and hard, and full of fragments of flinty stone, quartz, and gravel: this extends to the depth of from 10 to 20 feet, and is bottomed on limestone rock. It is so compact in some places as almost to resist the pick-axe; in others it seems to partake of marl, is less gravelly, and readily penetrated. The country is particularly characterized by quartz, which is strewed in detached pieces over the surface of the ground, and is also found embedded in the soil at all depths."[9] The principal wood was scrub oak. There were detached small areas of good farm land, but as a whole it was not attractive to the cultivator.

From early times men dreamed of linking the lead region to the Great Lakes by means of a canal at the portage. Schoolcraft suggested a corollary to this plan in a canal from the portage, along the Wisconsin bottom

[7] Henry R. Schoolcraft, *Summary Narrative of an Exploratory Expedition to the Sources of the Mississippi River in 1820: Resumed and Completed by the Discovery of Its Origin in Itasca Lake, in 1832* (Philadelphia, 1855), Appendix 561-562. The big nugget was, of course, the one taken out of the Buck Lead in 1819.

[8] Such as the "lazy-rolling waves of the sea after a tempest" employed in both cases, the writer evidently being fond of that figure.

[9] *View of the Lead Mines of Missouri*, 26-27.

to the bend at Arena, thence to the uplands of Iowa County and through the heart of the lead region to Galena, taking in as feeders both the Pecatonica and Fever rivers. This would afford a northern and Great Lakes market instead of the tedious route by way of the Gulf of Mexico and the Mississippi, and would save this country from the evil effects of the occasional low water in the great river. His imagination even coursed so far afield as to picture a railway traversing essentially the same route.[10] At that very time the work of locating the military road, from Fort Howard at Green Bay to Fort Winnebago (Portage), and from Portage to Prairie du Chien (Fort Crawford), for which Congress had appropriated money in 1830, was going forward under Judge Doty's eager leadership.[11] The final section of that road, Fort Winnebago to Fort Crawford, was made to pass mainly along the ridge dividing the streams flowing into the Wisconsin from those debouching into the Mississippi and Rock rivers; in other words, through the northern margin of the Wisconsin lead area. It connected with roads converging on Galena which had already been opened by lead teamsters from various points along the ridge.[12]

The sudden up-leap in population, from 200 in 1825 to 1,000 in 1826, then to 4,000 and then to 10,000[13]

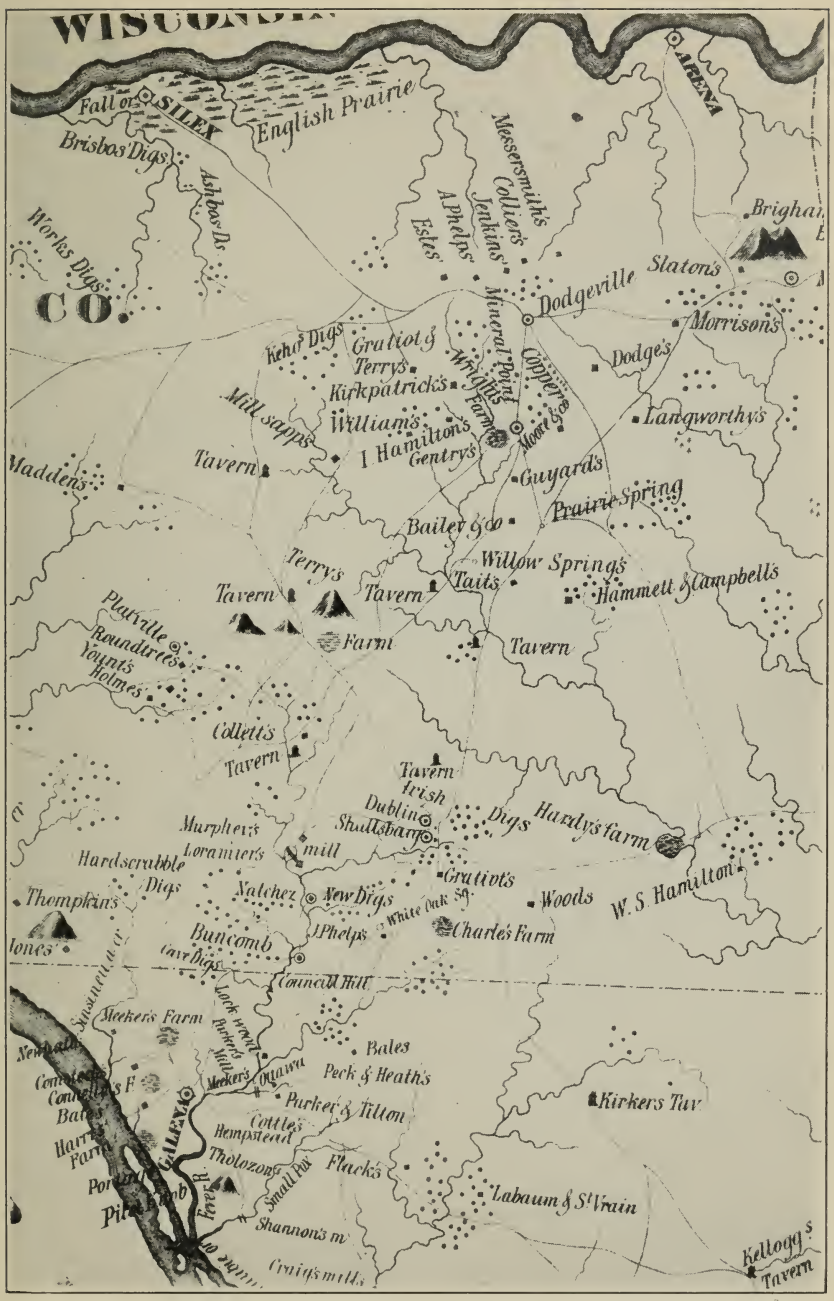
[10] *Expedition to the Sources of the Mississippi*, 562-563. "Arena" was evidently the shipping point on the Wisconsin later called "Helena." Cf. R. W. Chandler's map of 1829, *post*, op. p. 42.

[11] H. E. Cole, "The Old Military Road," *Wisconsin Magazine of History*, ix, 47-62.

[12] *Ibid.*, map op. p. 48. See also map of the Wisconsin lead region, following Owen's chart, 1839, in *Wis. Mag. of Hist.*, iv, op. p. 32; and R. W. Chandler's map of the United States lead mines on the Upper Mississippi River, 1829, *Wis. Hist. Colls.*, xi, op. p. 400.

[13] Dr. John Marsh wrote, July 29, 1828, that about 10,000 white intruders were then on the lead lands which rightly belonged to the Winnebago. See George D. Lyman, *John Marsh, Pioneer: The Life Story of a Trail-blazer on Six Frontiers* (New York, 1930), 143.

(round numbers being used by the estimators who may not have been accurate in all respects) was greatly encouraged by the admirable local facilities for raising food supplies. From the first there were farms as well as mines and soon there were mills as well as farms. Chandler's map of 1829 locates mills as follows: beginning at the south, Craig and Janney's mill was on Plum Creek south of Galena, near the Mississippi, Craig's mills on Apple River, Shannon's on Small Pox, Parker's on Fever, and Hough's on Platte River. The last two were within the Wisconsin boundary. The Harris, Connelly, and Meeker farms are designated in the peninsula between the lower Fever River and the Mississippi, while in the Wisconsin area are shown farms near Gratiot's, Hamilton's, Platte Mounds, and Mineral Point. Probably these were noted particularly because they were relatively extensive, for there is no doubt that many other cultivated tracts were distributed among the mining settlements, which constituted an excellent market. The region, indeed, on account of the combination of mining and farming, had already acquired a potentially permanent population. They were mining farmers or farming miners, the two occupations supplementing one another. Because they were making homes in the lead districts and growing their own supplies, these people could afford to raise mineral on a narrower price margin than miners elsewhere. The catastrophic drop in the value of lead, from $4.50 per hundred in 1827 to $2.00 per hundred in 1829 ought to be reflected in the production figures; yet during the latter year our lead region made more than ever before, while in Missouri the higher cost of production due to costly digging, costly transportation, costly food, and other handicaps caused a marked falling off. Normal prices



SECTION OF CHANDLER'S MAP OF 1829 SHOWING MAJORITY OF MINES THEN OPERATING

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were restored in 1832, after which time production totals advanced steadily to new high levels for fifteen years, and then gradually declined.

It is hardly necessary to point out that, in view of the enormous lead production which the Spanish mines were attempting to dispose of through world trade, the tariff was the only practicable means of enabling our own lead miners to retain their home markets; but the demand in this country was so great that an oversupply was not reached for some years.

CHAPTER V

THE LEAD MINERS

THE editor of the Galena *Advertiser*, writing February 28, 1835 about social conditions in the mines, said: "Kentucky has yielded to us many of her choicest men; and Virginia and North Carolina have sent to us from their barren coast and worn out fields, men who were the pride of their native states."

The statement was incomplete, general, and quite spontaneous; yet, for that very reason, it deserves attention as revealing almost unconsciously the main districts which sent the early emigrants to the lead region. "Kentucky," in the editor's sub-conscious mind, doubtless stood for the Southwest, including southern Indiana, southern Illinois and Missouri, peopled so largely from the blue-grass state; while "Virginia" and "North Carolina" symbolized the old South.

The seventh census (1850) gives the first thoroughgoing description we have of Wisconsin's population. Earlier enumerations provide little more than the names of heads of families and occupation groups, with the numbers of persons in each group. Since there was a specially large emigration of old miners to California in 1849 and the spring of 1850, we do not have in that census a perfect picture of the mining population under normal conditions, and, of course, there is no sure way of segregating the earliest settlers. Still, it is the best now available, and it can be partially corrected from other sources.

The census assigns to Grant County 16,139 persons, to Iowa, 9,582, and to Lafayette, 11,531, or a grand total for the three lead counties of 37,252, the aggregate for the state at that time being 305,391. The first striking difference between the population of the mining region and that of the balance of the state is in the larger percentage of native-born, and of English-speaking foreigners. More than a third of the population of Wisconsin in 1850 were persons originating outside of the United States, and 58,000 of our 305,000 people or 19+ per cent of the whole were of non-English-speaking stocks. The lead counties, however, had an aggregate of only 1,559 non-English-speaking foreigners, or slightly more than 4 per cent. The bulk of the foreign-born were from England, 5,385, Ireland 2,571, Wales 585, Canada 475, and Scotland 191.[1]

Another characteristic of the lead-mining counties was that their native population, aside from persons born in Wisconsin, derived more largely from southern and southwestern states than that of any of the other sections of Wisconsin. Each of these three counties shows a larger number of natives of Illinois than of any other state. The "Suckers" in Grant County numbered 1,173 while Ohio furnished 1,130 and New York 1,095. In Iowa County, Illinois was represented by 432, New York by 431, and Ohio by 351. Lafayette had 748 Illinoisans, 682 Pennsylvanians, and 605 New Yorkers. In all other Wisconsin counties except Green the natives of New York, added to those of Wisconsin made a clear majority of the American-born. In these three counties only are the New Yorkers less numerous than the Illinoisans.

[1] No doubt some of the Canadians were French, but probably the majority were English-speaking.

Most of the Illinois natives were from the southern half of that state and therefore assimilate to the southwestern element rather than to the eastern or Yankee element. This is emphasized by other facts. For example, Wisconsin as a whole in 1850 had in it 1,611 natives of the Old Dominion. Of these 778, nearly one-half, were in the three lead counties. Kentuckians were domiciled in Wisconsin to the number of 1,429 persons, 993 of whom, or nearly seven-tenths, were in the lead region; as were also 317 of the 449 Tennesseans, and 840 of the 1,012 Missourians.

The comparatively heavy influx from Missouri suggests that, in part at least, lead miners from that region emigrated to Wisconsin and Illinois, attracted by the greater profitableness of mining in that locality. The case of Colonel Henry Dodge, which was typical, illustrates the movement. There were miners from other sections as well as from Missouri, and one very prominent pioneer, Dr. Moses Meeker, had devoted five years to the business of manufacturing white lead at Cincinnati before coming to the mines. On the whole, however, the lead miners represented as great a diversity of previous experience as did the California gold seekers of 1849.

Thus the lead region was a distinctive social area. Whereas the southeastern counties constituted a new Yankeeland, the upper lake-shore counties a mingling of Yankees and Germans, the three counties in question are the only portion of the state which represents dominantly the South and Southwest. Moreover, lead mining had served as a selective influence, attracting the more virile, eager, and adventurous of the Southwesterners, those who were most responsive to the pioneering appeals. Like the emigrants to Oregon and many of

those to California, they were men whose social tradition included stories of the old Allegheny frontier, of men like Boone, Kenton, and McCulloch; of Indian wars, forays, and hairbreadth escapes. Some, like Henry Dodge, had been Indian fighters in their own right, and the Winnebago outbreak of 1827 followed by the more serious Sauk and Fox (Black Hawk) War of 1832, proved how ready were these frontiersmen not only to defend against Indian attacks but to wage the traditional "war of extermination" against their barbarian foe. The grim ferocity with which Black Hawk's helpless followers were destroyed reflects the aroused hates and fears generated by nearly two centuries of Indian fighting along the western border.

Among the lead miners were many men who would have been leaders in any community, whether East or West. They were physically impressive, mentally keen, independent, and able; and though their ideals might not have harmonized precisely with those of older societies, they were prompt to resent wrong doing and to sustain suffering virtue. Some vices characteristic of the frontier and of mining societies flourished, especially heavy drinking, quarreling, and fighting. Among the leaders, who wanted to be regarded as southern gentlemen, there was the usual willingness to meet insults or supposed insults, by a challenge to the "field of honor"; or by the summary use of firearms.

The carrying of concealed weapons was common in the mining region, while among the Yankees of the Southeast, and among the German and Norwegian immigrants, that custom was reprobated. No doubt it was responsible for some of the serious affrays which occurred from time to time in the mines, just as it proved to be the bane of social life in early California and with

far less excuse, because in our lead counties the organization of the judicial system was complete and usable almost from the beginning. Frontier conditions and the spirit of the Southwest are to blame for the rudeness that practice symbolizes. There is no reason to assume that the miners who labored with pick and gad, or handled the windlass at the shafts, were more addicted to drinking and fighting than woodsmen, or others engaged in heavy physical work, away from their families and in an almost exclusively male society. But the difference between them and an orderly farming community was very great.[2]

The proportion of outstanding men in the lead-mining communities was a significant fact of this peculiar social organization. In the year 1856 Stephen Taylor, an educated, scientifically inclined gentleman of Philadelphia, who had been in the lead region twenty years earlier, wrote as follows about Mineral Point: "Among the most distinguished of the earliest pioneers of Mineral Point yet upon the stage, are Col. Robert C. Hoard, Col. Robert S. Black (now of Dodgeville), Col. Henry M. Billings, Col. Daniel M. Parkinson, Col. Abner Nichols, Francis Vivian, Parley Eaton, Levi Sterling, Edward Beouchard, Josiah Tyack, James James, Samuel Thomas, Mrs. Hood, Amzi W. Comfort, O. P. Williams (now of Portage City), M. V. B. Burris, Milton Bevans, Peter Hartman, John F. O'Neill, William Sublett, John Phillips, John Milton, George Cubbage, James Hitchins, John Caserly, Edward Coode, and

[2] The most gruesome case under the second head was the killing of Charles C. P. Arndt by James R. Vineyard in the Council Chamber at Madison, February 11, 1842. Lead region ideals of justice were illustrated by the admission of the slayer to bail, and finally by his acquittal at the hands of a jury on the plea of self-defense. Milo M. Quaife, "Wisconsin's Saddest Tragedy," *Wis. Mag. of Hist.*, v, 264-283.

William Tregay. And the following, who have since paid the debt of nature, viz: Col. John D. Ansley, Col. John McNair, Robert Dougherty, Capt. William Henry, Stephen Terrill, Mark Terrill, Dr. Edward McSherry, Dr. Richard D. Ridgley, Nicholas Uren, Richard Martin, James S. Bowden, John Hood, Lord Blaney, Joseph Sylvester, Matthew G. Fitch, Thomas McKnight, Stephen B. Thrasher, Robert W. Gray, Joseph Morrison, James Hugo, Hugh R. Hunter, Edward James (late U. S. Marshal), William Prideaux, Joseph James, Benjamin Salter, and 'Cadwallader the keg-maker.' "[3] That the list could be considerably extended is evident from the omission of such names as those of Major John P. Sheldon, General Charles Bracken, Henry B. Welsh, Henry Plowman, and others which instantly occur to one who is somewhat familiar with the beginnings of Mineral Point. And if the story of the development were carried forward only a few years, one would be obliged to add such suggestive names as C. C. Washburn, Cyrus Woodman, M. M. Cothren, M. M. Jackson, M. M. Strong—and a host of others who, if not miners or smelters, were nevertheless intimately concerned with the business and professional interests which rested mainly on mining.

A calendar of names similar to the above, though perhaps not so imposing, might be exhibited for each one of the prominent mining centers of the three counties, especially Platteville, Potosi, Hazel Green, Shullsburg, Dodgeville, while the smaller mineral-producing areas each had its leading character who was usually a smelter with some financial means, business ability, and dominant personal influence in the community. Like the later cattle barons of the western plains, the wheat

[3] *Wis. Hist. Colls.*, ii, 487-488.

kings of the Red River valley and the Palouse country, or the lumber barons of northern Wisconsin and Minnesota, the big lead operators were weighty men both "on change" and in politics. As we shall see, they largely controlled the affairs of the new territory for several years, and remained, at least up to the Civil War, more powerful in state politics than was warranted by the relative strength of the lead-mining constituency.

When the territory was organized, July 3, 1836, it was found that President Jackson had appointed as governor, Colonel Henry Dodge, who had been engaged in mining and smelting lead in Wisconsin since the year 1827. Dodge had been a soldier, sheriff, salt maker, and lead miner in Missouri, his home from young manhood, though the place of his nativity was old Vincennes, Indiana, and of his upbringing, Kentucky. He was a typical frontiersman of the better class, soldierly in bearing, and "well set up." Tradition tells how, during the excitement over the so-called "Burr Conspiracy," a grand jury at St. Genevieve, in Dodge's absence, presented a true bill against him as a participant in Burr's plot, then considered treasonable. Dodge, on learning of the action taken, promptly offered to fight the twelve "good men and true" singly, and had actually placed a good share of the list *hors du combat* before the cowed jury agreed to quash the indictment against him.

When Dodge began smelting near Dodgeville, he shipped his pig lead from Helena to New Orleans by flatboat, as he had done from his father's plantation far down on the Mississippi. He led the harassed miners against the Winnebago hostiles in 1827, and took a very prominent part in the Sauk and Fox War five years later. His career as colonel of the First Dragoons,

with which he patrolled the Far West for three years, added to his already considerable military fame. For the space of twenty-one years, from 1836, he was steadily in public office as governor to 1841, delegate in Congress to 1845, governor again from 1845 to 1848, and United States senator till 1857. He died in 1867 "full of years and of honors."

Colonel Dodge, in many of his characteristics, epitomizes the upper crust of lead-mining society, which though "rough and ready" was not without a good measure of dignity and old-fashioned southern courtliness. George Wallace Jones, also a native of Vincennes, who in 1836 was mining, smelting, and farming near the bank of the Mississippi on the south slope of Mt. Sinsinawa (Grant County), was the delegate in Congress from the new territory. Though more highly educated, having enjoyed the advantages of Transylvania University, he was and continued a great friend of Dodge, both men ending their careers in Iowa from which state Jones entered the United States Senate during Dodge's term as senator from Wisconsin. Charles Dunn, a native of Kentucky living at Belmont, Lafayette County, was made by Jackson chief justice of the territorial supreme court. Thus the principal offices of the new Wisconsin territory were held by a trio of Southwesterners.

Since nearly one-half of the population at that time was in the lead region, that section had a right to control the politics of the territory, and natural selection brought the Dodges, Joneses, and Dunns to the top. Other types were less successful politically, as witness William S. Hamilton, prominent miner, smelter, and all around speculative business man of Wiota, Lafayette County. Hamilton was one of the younger sons of Al-

exander Hamilton the great secretary of the treasury and Federalist leader who in 1804 was killed by Aaron Burr in a duel. Young Hamilton had been destined for the army but in 1817 after three years at West Point he resigned, came West, and took up the work of surveying under Colonel William Rector, surveyor-general for Illinois, Missouri, and Arkansas. In Illinois he attained local following enough to be twice chosen to the legislature, but failed to make a permanent impression upon the politics of the state. He began mining in Wisconsin contemporaneously with Colonel Dodge and like him was concerned in the Indian troubles of both 1827 and 1832. In 1835 he was elected from the then Iowa County a member of the council of Michigan territory called to meet at Green Bay, January 1, 1836. This was the so-called "Rump Council," attended only by members chosen from the Wisconsin section of the territory, the peninsula of Michigan expecting soon to enter the Union as a state. Hamilton was chosen president of the council and took a very prominent part in its deliberations on internal improvements and other subjects, including the location of the capital of the future Wisconsin territory for which he favored Cassville on the Mississippi. During the year 1836 Hamilton branched out in his business, building a smelter at Muscoda (also called Savannah and English Prairie) on the Wisconsin and purchasing lead from the nearer mines, like Pedlar's Creek, Wingville, and Centerville, to be smelted and shipped to St. Louis on the little steamers which in 1837 began running up the Wisconsin as far as Fort Winnebago. As superintendent of the Muscoda business he employed a young Maineite, Charles L. Stephenson. In charge of the actual smelting was Vincent Dziewanowski, scion of a Polish noble

house, refugee of the disastrous Polish revolution of 1832, who afterwards married a niece of General Charles Bracken, of Mineral Point, and settled on a farm near Avoca becoming a highly respected citizen and founder of a fine family.[4]

Hamilton was a persistent seeker for political preferment. But, though he was not without ability, he lacked the morale, tact, and suavity necessary to succeed in political canvasses, and besides he found it quite impossible to free himself from those federalistic prepossessions which were anathema to the ingrained Jacksonian democracy of the lead region. He won election to the lower house of the territorial legislature in 1842. Later, he tried to go to Congress and failed, as he did also in his ambition to be elected to the constitutional convention. In 1849 he went overland to California where the following year he died, forlorn and almost forsaken. Hamilton adapted himself only indifferently to the lead-mining environment. He was never genuinely popular, and being too conscious of his distinguished parentage, political adversaries derisively dubbed him "the little scion of a great family." His close contacts were with eastern, not southern or southwestern men, and the friend who later hunted up his unmarked grave in Sacramento and placed a monument upon it was Cyrus Woodman of Maine and Massachusetts.

A man of very different antecedents from any of the above was Colonel Henry Gratiot (pronounced Gratch'ot). He was the son of Charles Gratiot, famous Illinois and St. Louis trader, partner of the Chouteaus, whose sister he had married. Henry Gratiot was

[4] See on the founding of Muscoda by Hamilton, *Wis. Mag. of Hist.*, iv, 27-43; on Dziewanowski, *ibid.*, vi, 373-385.

born at St. Louis in 1789, when Upper Louisiana was still a Spanish province. In 1825 he removed to Galena and in 1826 to Gratiot's Grove, just over the line in Wisconsin and about fifteen miles northeast of Galena. Here he and his brother J. P. B. Gratiot built several furnaces and kept a store; and here an interesting, lively village grew up around their establishment. Henry Gratiot was a public-spirited man who, as government agent for the Winnebago, was able to perform the most critical service to the country during the Black Hawk War in preventing those Indians from openly joining the hostiles, in arranging for the ransom of the Hall sisters, and in other ways. Gratiot represented the highest culture of the lead region, possessing a mastery of both French and English, wide general information, and much personal charm.

He was a thorough business man as well. In the spring of 1836 he visited Washington, the trip on which he became ill and died April 27. One day George W. Jones, delegate in Congress, was making a speech on the Wisconsin territory bill in the course of which he emphasized the value of the lead mines to the United States. To illustrate he said that Colonel Gratiot, who was present in the balcony, had turned over to the government in the way of rent, 1,200,000 pounds of lead, worth at prevailing prices, $60,000 "all costs paid." Since the actual product of the smelters would be ten times the rent, this gives some idea of the amount of ore which had passed through the furnaces at Gratiot's Grove in less than ten years.

In his list of 53 distinguished Mineral Pointers as given above, Taylor mentioned at least 16 who were born in England, 2 natives of Ireland, 1 from Londonderry, the other from County Tyrone, and 1 who may

A CORNISH MINER'S HOUSE AT MINERAL POINT

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have been German though confirmatory evidence is lacking. There were as many more whose derivation cannot be established either from the census or from the published local biographies, and doubtless some of them were of foreign, especially English, nativity. In effect, almost if not quite one-half of the above list were Englishmen and in nearly all cases that can be localized the English were from Cornwall. The Cornish emigration was important during the decade beginning with 1835. The extraordinary development of lead mining in Spain about that time rendered the less productive mines of southwest England unprofitable, and drove hundreds of highly skilled pick and gad men to Wisconsin where they became a leading mining element. A few others came from the Alston Moor mining field, more from Wales, and some from the Isle of Man.[5]

The "Cousin Jacks," as the Cornish were called, ranked as the most skillful practical miners, making good wages from diggings which Americans were ready to abandon. Their coming revived interest in many old mines. Moreover, some of the foreign-born were among the most enterprising miners and smelters in the lead region. Colonel John D. Ansley, for example, developed on his property what for a time was supposed to be a valuable copper mine. Since the art of smelting copper was not properly understood at Mineral Point, he sent many tons of the ore to England in order to have tests made. It was hauled with ox-teams to Sinipee on the Mississippi,[6] shipped to New Orleans and thence reshipped for Europe. In 1839 Colonel Ansley went to England, and as it was reported, sold one-half

[5] See Louis A. Copeland, "The Cornish in Southwest Wisconsin," *Wis. Hist. Colls.*, xiv, 301-334.

[6] Six miles above Dubuque on the Wisconsin side of the river.

of his holdings for $300,000, and "sold conditionally" the other half for "nearly an equal amount."[7]

The native American contingent of Taylor's list, so far as can be ascertained, represents a cross section of lead region society which is thus seen to have been less exclusively derived from the South and Southwest than was indicated in the editorial which stands at the head of this chapter. Of 13 names which can be allocated, 4 are Kentuckians, 1 is from Missouri, 2 from Georgia, 1 from South Carolina; but there are also 2 from New York, 1 from Massachusetts, 1 from Maine, and 1 from Pennsylvania. At least 9 of the outstanding men mentioned by Taylor went to California in 1850 and 1851. Probably others went in later emigrations.

[7] See *Northwestern Gazette and Galena Advertiser*, June 8, 1839. The supposed sale is said by some to have been frustrated through the machinations of G. W. Featherstonhaugh, the English geologist, who visited Mineral Point in 1827. See *Wis. Hist. Colls.*, vi, 355-356. As a matter of history, the copper mine did not prove the success anticipated.

CHAPTER VI

THE LEAD MINERS IN POLITICS

WISCONSIN'S political pot began to splutter in the summer of 1836. On the twentieth of April, that year, President Jackson approved a bill creating the territory of Wisconsin, to include all that portion of Michigan territory lying west of the present state of Michigan, the law to be in effect from and after July 3. The boundaries of the new territory embraced not only all of the present state of Wisconsin, but west of the Mississippi it included everything north of the state of Missouri, to the Missouri and White Earth rivers. In familiar terms, this meant all of the present Iowa, the present Minnesota, and a large part of South and North Dakota.

It was well understood that these boundaries would be temporary, no one contemplating a future state of such stupendous proportions, which could only have been created in defiance both of geography and of the sentiment, built up during half a century under the Ordinance of 1787, demanding that the country north of the Ohio and east of the Mississippi be erected into five states. Four of these were established—or would be when Michigan should enter the Union. The fifth would be Wisconsin, adjusted on the west to the natural boundary provided by the father of rivers. As a historical fact, it was trimmed somewhat more drastically in the northwest, as a favor to Minnesota, but that eventuality

could not be foreseen. So there were, for most persons, two Wisconsin territories: one temporary, unreasonably extended to provide administration for vast regions still bare of inhabitants except in a few widely sundered localities; the other "Wisconsin proper," having Canada for one boundary, Michigan for another, Illinois for a third, and the Mississippi River for the fourth.

In Wisconsin proper were four communities which were sufficiently numerous and sufficiently self-conscious to figure in the politics of the new territory, and the county divisions already effected under the Michigan government marked these off with a fair degree of distinctness. They were Brown, Crawford, Iowa, and Milwaukee, the last named having been recently carved from the first to provide for the new eastern people who were settling in such numbers near the mouths of Milwaukee River, Root River, and Pike River—all near one another on Lake Michigan and all widely separated from Green Bay, the old trading and military settlement which made the nucleus of Brown County. The county of Iowa had been set off from Crawford, October 9, 1829, after the cession by the Chippewa, Ottawa, and Potawatomi of their claim to lands between Rock River and the Wisconsin. It included what was afterwards embraced in Grant, Iowa, and Lafayette, the three lead-producing counties, and Iowa, therefore, at the beginning of the territorial era, was the "Lead Region." The other county in Wisconsin proper was Crawford which after 1819 had shared with Brown the administration of the country west of Lake Michigan, her territory at first lying west of a line drawn north and south through the portage of the Fox and Wisconsin rivers, though after Iowa was cut off from it, it lay wholly north of Wisconsin River. Its principal

settlement was the village of Prairie du Chien, rival of Green Bay in venerableness and, like the latter, a trading and military station. Crawford was the least populous community in Wisconsin proper, numbering at the census of 1836 only 850 persons as against 5,234 for Iowa County, 2,706 for Brown, and 2,893 for Milwaukee.

So far, therefore, as the country east of the great river was concerned, the lead region was easily the dominant section and would be able largely to control the course of politics until immigration into the beautiful farming lands near Lake Michigan, which were proving so attractive to Yankee settlers, should change the census balance. Temporarily, however, the two counties west of the Mississippi, Dubuque and Des Moines, had to be reckoned with. The former of these, based on a new development centering at the old lead mines once operated by Julien Dubuque, and later by the Sauk and Fox Indians, until the Black Hawk purchase in 1832, had grown in the course of three years to an American community numbering 4,274. Des Moines County, occupying the southern part of the Black Hawk purchase, was a pioneer farming settlement rather than a mining camp, but so alluring had it proved to western settlers that it numbered at the census date 6,257. Taken together, therefore, these two counties had 10,531 persons as against 11,683 in Wisconsin proper. The village of Dubuque opposite the southwest corner of Wisconsin proper was at the moment possibly the second town in the territory, Milwaukee being the first, but Burlington, a hundred miles or more farther down the river in Des Moines County, was an ambitious rival.

The law constituting the new territory directed the governor to cause a census to be taken and under it to apportion among the six counties 26 representatives and 13 councilors in as nearly equal a manner as possible; also to convene the first legislative assembly at such place as he might select. The carrying out of these instructions created much ill will toward the newly appointed executive. Governor Dodge's proclamation assigned 2 councilors to Brown County, and 2 to Milwaukee, their population being nearly equal; it gave 3 to Iowa, 3 to Dubuque, and 3 to Des Moines, which left some inequalities to be corrected in the distribution of the house members, Dubuque having about 1,000 less inhabitants than Iowa, and Des Moines, 1,000 more. Crawford received no councilor, but was authorized to elect 2 representatives as against 7 from Des Moines, 5 from Dubuque, 6 from Iowa, 3 from Milwaukee, and 3 from Brown. This was really a generous apportionment to Crawford, but she considering herself "disfranchised" as regards the upper house, proceeded to elect Thomas P. Burnett to the council and to appeal for admittance, of course without success, the law having fixed the aggregate number for the whole territory at 13 and no county being self-sacrificing enough to give up 1 for the sake of humoring the good people of Prairie du Chien. The distribution seems as fair as it could well have been made and, outside of Crawford County, was finally accepted with good grace.

Not so the selection of the meeting place for the first legislative assembly. Dodge chose Belmont, in the southeastern sector of the lead region, at the time little more than a paper town though destined to blossom for a day under the political stimulus which its new status gave it. The so-called "Rump Council" held at

Green Bay in January, in petitioning Congress for a law creating the territory of Wisconsin, had recommended that Cassville on the Mississippi be declared the capital.[1] This motion was carried, against the protest of Brown County, by a combination between the lead region and Milwaukee County, the cement being a project for uniting the Mississippi to Lake Michigan by means of a railway traversing the lead region. In favoring Belmont the governor pointedly ignored Cassville where a $30,000 hotel was in course of erection to provide the necessary accommodations. Moreover, the place chosen was no more central than Mineral Point or Platteville would have been, and possibly not more than Dubuque, all of which towns were immeasurably better equipped to care for the lawmakers during the approaching session. Dodge's action in this matter aroused outspoken criticism at Dubuque, whose people were contending for both the temporary and permanent seat of government and in fact it was disapproved generally. The charge was made that Dodge had played into the hands of the town-site owner of Belmont, John Atchison. Certainly the choice was not an easy one to defend, accommodations of all kinds at that place being inadequate, and it looks as if the governor in making it had been overinfluenced by some of his friends. The promise he made in the first message, that he would leave the locating of the permanent capital wholly to the legislative assembly, was obviously intended to placate the opposition his choice of Belmont had aroused.

When the lawmaking body convened October 25, 1836, the question of the seat of government for the new territory, which Congress had left for the first legislative

[1] See "Seventh Legislative Council," Wisconsin Historical Society *Proceedings*, 1920, p. 84.

assembly to determine, promptly assumed the leading place on the list of its major problems. Dubuque, as has been said, was an active candidate—perhaps the most active of all. A newspaper, *The Visitor*, was started there to promote a favorable sentiment, and during the early days of the session the governor and legislative assembly were invited to spend a week-end in that village where they were wined and dined and lionized in approved booster fashion. No other town gave itself so much trouble or expense in the business, but Mineral Point was hoping the lightning would strike her, so was Belmont, and so was Fond du Lac; while Cassville, having the interested support of both the lead region and the southern lake shore, believed her calling and election sure.

Unable to break down the alliance between the southeastern members and those from the lead region, Dubuque combined with Brown County in a double-headed plan to secure for herself the temporary capital, with a portion of the $20,000 appropriated by Congress for public buildings at the place to be elected, while leaving to Fond du Lac the permanent seat of government and the balance of the building fund. Some argued that the appropriation could not be legally split, but such refinements of interpretation failed to halt the movement.

The big business men or speculators of the territory, at least James Duane Doty and his Green Bay group, including Morgan L. Martin, seemed to be satisfied with this arrangement, though Martin's interests were divided between the Fox valley and Milwaukee where he was joint owner of the town site as partner of Solomon Juneau. But the scheme was blocked in the council committee of the whole by a vote of six for and seven

against. Judge Doty was the shrewdest, most subtle, suave, and insinuating of all the speculators who were hoping to make fortunes, or at least bolster up their fortunes, through a capital location deal. He began in good time writing and inspiring essays for the press. In one of these it was suggested that the portage would be a favorable place for the seat of government, since a line drawn due south from that point would pass through the Four Lakes and divide the population of Wisconsin proper into two relatively equal portions. But he likewise hinted at the advantages possessed by Fond du Lac, and the Four Lakes figured prominently in his descriptions, though he did not openly nominate any place in that locality for the honor.[2]

But Doty did not confine himself to the written word. Being a consummate political manipulator, a master of chicane, and a lobbyist of unusual charm and impressiveness, he took a direct part in persuading the legislators to vote as he wanted them to vote. We are able to trace some of his moves in the capital location game, though many others will doubtless never be revealed. Doty had holdings which were widely spread over the territory, and he was not averse to making this universally interesting question help market his properties wherever they might be. He told John Catlin in September that Mineral Point would be the place selected, the Milwaukee and Green Bay members being for it. Had this combination actually materialized, the thing would have been settled, for Iowa County had 3 councilors and the other two counties 4, making a majority of that body. Also, Iowa had 6 members of the

[2] Doty's ideas can be detected in articles published in the Belmont *Gazette* of November 9, 1836, and in the Milwaukee *Advertiser*, September 15 and 29, 1836.

house, Milwaukee and Green Bay 3 each, which fact accounts for 12 of the 26. By capturing the 2 from Crawford, who should have been pleased to have the capital so near Prairie du Chien, the measure could have been carried in the second branch. It ought to be stated that Doty made the above declaration in connection with a bargain for a piece of land he owned in Mineral Point and which he was willing to sell for $10,000![3] We do not know how the interest he aroused at the portage may have affected his sales there, but it is certain that he made a number of sales at the Fond du Lac town site.[4]

In his writings, Doty set forth the unique charms of the Lake Winnebago district, where he controlled much real estate, and early in the legislative session he petitioned for a charter for a canal to connect Fond du Lac River with Rock River, and ultimately Rock River with the Wisconsin at Kentucky City, one of the numerous paper towns. The second canal would pass through the Four Lakes where Doty in October laid out a town on the peninsula between Third and Fourth lakes, naming the site "Madison City" in honor of James Madison. With a plat of Madison in his pocket, he now visited Belmont, arriving there it appears early in November.[5] On the tenth, John P. Arndt, of Green Bay, who ob-

[3] Catlin to Thomas J. Ormsbee, from Green Bay, September 9, 1836. Moses M. Strong Papers, Wisconsin Historical Library.

[4] Letter of F. A. Foster of the Fond du Lac Abstract Company dated January 29, 1930, says: "The *Fond du Lac Company*, which owned some 4,000 acres in and around Fond du Lac, made a plat of city lots in Fond du Lac which plat was recorded August 22, 1836. All conveyances of land owned by this company were made by James D. Doty, president, and a number of lots were sold by the company prior to November 30, 1836."

[5] November 8 is the date of the submission to the council of a map of Wisconsin territory executed by John V. Suydam, who accompanied Doty and who prepared the Madison plat. See Suydam's memoirs, *Wis. Hist. Colls.*, vi, 390-392, and Draper's notes, 391. See also *Journal of Council of Legislative Assembly of Wisconsin*, 1836, p. 29.

viously acted as Doty's manager in the council, brought in a bill making Fond du Lac the permanent seat of government, with $12,000 of the appropriation for public buildings, and Dubuque the temporary capital, with $8,000 for public buildings. This may show that Doty really preferred Fond du Lac to Madison, but it may also mean that being sure the bill could not be carried, he was willing to placate his Green Bay friends by affecting a preference for that place. And, meantime, fixing the public's eye upon Fond du Lac should help to make corner lots sell.

The question, which was discussed in committee of the whole for three days, elicited "asperity of feeling" says one writer. Another says it was the occasion for a "very warm and excited debate."[6] The report of the "lobby," a sort of parliament of irresponsibles consisting of interested visitors, who played "fool" to the Solons, and in that character told a good deal of truth, is more illuminating than the brief and colorless council journal. By way of lampooning the debate on the capital location question, the lobby brought in a farcical bill on the subject of "politeness, good breeding, and eloquence." The pretended report upon that measure says: "after the words 'Madison' and 'swamp' insert 'no gentleman shall give another one the lie more than three times on the same subject, provided he can think of anything else to say'; and after the words 'Fond du Lac' in the same section, insert: 'no gentleman shall use any other words except marshalled forces, puppets, combinations, speculations, private interests, etc.' After the words 'The kind interference of the Des Moines gentlemen in assisting in the location of our capital' insert 'A Dubuque dinner.' "

[6] Galena *Gazette and Advertiser*, November 19, 1836.

One sample of the oratory displayed got into the press, probably because it was so unusual in its phraseology. It was the speech of David R. Chance, one of the house members from Des Moines who was a preacher as well as a legislator. Mr. Chance said he had beheld a "beast with six heads and eight horns" rising in the west (Dubuque), and "a beast with six heads and twelve horns" (Brown County) rising in the northeast. This was the combination designed to settle the seat of government question by dividing the building appropriation in the ratio of eight to twelve between Dubuque and Fond du Lac.[7]

The council bill was amended in committee of the whole by striking out "Fond du Lac" and inserting "Madison"; and it was further amended by striking out "Dubuque" and inserting "Burlington." The latter as the temporary capital, however, was to receive none of the money appropriated for public buildings, the entire $20,000 being left to Madison. These propositions were brought in by one of the councilors from Des Moines, Joseph B. Teas. In favor of the amended bill were finally recorded the votes of all 3 of the Des Moines members, 2 of the Iowa County members (James R. Vineyard being opposed), 1 of the 2 Milwaukee members, and 1 of the 2 Brown County members. The strength of the combination was put to the test, for every real and almost every prospective town in Wisconsin was proposed, by way of amendment, in place of Madison; all were voted down by the same victorious majority of 7 votes against 6. The Burlington end of the deal was put through by the same voting

[7] Belmont *Gazette*, November 30, 1836. Also reprinted in the other three Wisconsin papers of that time: Milwaukee *Advertiser*, *Wisconsin Democrat* (Green Bay), and Dubuque *Visitor*.

team. The house of representatives recorded in favor all 7 from Des Moines, all 6 from Iowa, 2 from Milwaukee out of 3, and 1 from Crawford out of 2. Dubuque and Brown were solidly against.

The opposition of Vineyard, the Iowa County councilor, may have been merely personal, and the history of the Rump Council in January reveals that he harbored violent prejudices against Doty.[8] The latter being the chief beneficiary of the Madison location, he refused to sanction it despite the wishes of his lead region constituents. Vineyard did, however, vote to thwart Arndt's move to substitute Fond du Lac for Madison which was the first tactical effort after the bill had been reported as amended in committee of the whole and he also voted against the proposition to substitute Dubuque for Madison. Probably, if his vote had been needed, it would have been registered in favor of the bill.

In regard to Milwaukee, the evidence shows a very natural antagonism of interest between the two councilors, Alanson Sweet and Gilbert Knapp, the former being from the village of Milwaukee, the latter from Racine. Knapp was concerned about dividing Milwaukee County in order to create the county of Racine and on that subject he and Sweet disagreed at least as to method. Sweet was keen about securing advantages for Milwaukee, such as roads into the interior, a bank charter, the incorporation of a manufacturing company, harbor improvements, and the like, making clashes between him and his colleague almost inevitable. Sweet, was, or became in the course of the legislative history of the capital location bill, financially interested in Madison, taking up on the nineteenth of November 400 acres of government land adjoining the town plat. He may

[8] See Wis. Hist. Soc. *Proceedings*, 1920, p. 145.

have had interests in the neighborhood earlier. This would help to explain his prompt association with the Doty group, and the personal differences between him and Knapp originating in their local attachment to rival lake ports may have alined the latter on the side opposed to Doty. At all events, that is what happened.

Milwaukee had not pledged its delegation in favor of any particular location, but Kilbourn and others were feverishly intent on internal improvements, especially the projected Milwaukee and Mississippi Railroad and the Rock River Canal, both of which pointed to Madison if Cassville proved unavailable. The townsite speculators, Morgan L. Martin and Solomon Juneau, with their associates, were in agreement on the internal improvement policy as affording the best guarantee of Milwaukee's prosperity. After Mr. Sweet (who was suspect to this group) had secured the nomination for councilor, these parties put up George Reed, one of Martin and Juneau's agents, who was badly defeated, as was Martin himself in Brown County where he lived. These failures were felt to be serious. They put Juneau in a particularly bad humor, and convinced another of Martin's friends that the county would be "pretty miserably represented."[9]

Milwaukee, as might be expected, was well satisfied with Madison as the seat of government. The *Advertiser* (Kilbourn's paper), described it as "the most judicious selection that could be made, when we take into consideration that but a very short period of time will transpire e'er this territory will necessarily be divided, and if such a division takes place as most well informed

[9] Letter of George Reed to Martin, October 12, and letter of George O. Tiffany to Martin, October 23, 1836. Morgan L. Martin Papers, 1835-37, Wisconsin Historical Library.

persons have anticipated, Madison will be nearly the geographical center of the new state."[10] But Milwaukee had a grievance, nevertheless. The legislature, indeed, had passed an act to locate and establish a territorial road from Milwaukee to Blue Mounds, which was to run via Madison. This was a start toward internal improvements, but it was no equivalent for the desired incorporation of a railroad traversing the same route, and extending through the lead region to the Mississippi. A petition "as thick as your arm," wrote Ellis to Martin, had reached the house from Milwaukee praying for such an act. Sheldon, the Milwaukee County member to whom it had been entrusted, handled it ineffectively,[11] and Ellis of Green Bay truculently opposed its consideration. Sweet was reported to have been at least indifferent to it, because it was Kilbourn's "speculation." So the movement died, to Kilbourn's extreme annoyance.[12]

In place of a railway charter, a committee of which Charles Durkee of Southport (Kenosha) was chairman, brought in a memorial petitioning Congress to cause a survey to be made, the legislature being "unable to determine which is the most eligible route for a road from the various points which have been suggested for the commencement and termination." Two points in the western portion they had fixed—the Four Lakes and Blue Mounds. They thought the line might diverge from the Four Lakes east, one branch running to Green

[10] Milwaukee *Advertiser*, December 10, 1836.

[11] Sheldon lived near Janesville and was out of touch with Milwaukee village.

[12] See Milwaukee *Advertiser*, February 18, 1837, for an account of the big meeting at Milwaukee to condemn the representatives for their failure to secure necessary legislation "affecting the desired Rock River Canal and Mississippi Railroad." Kilbourn was chairman of the Resolutions Committee.

Bay, the other to the lake "at Milwaukee or Racine."[13] This proposal was adopted by the house of representatives, November 30, 1836, and by the council, December 1. Naturally, it satisfied nobody.

Green Bay's disgust with the results of the session can be imagined. That old, historic, military and fur-trading capital of Wisconsin had resented the treatment meted out to it by the Rump Council in January. The assembly, aside from some internal improvements favors, had treated her rather shabbily. Green Bay felt that, while not so situated as to be eligible for the political capital herself, a location for that purpose ought to be found at some point in the Fox River or Lake Winnebago basin, tributary to her harbor. November 5, 1836, A. J. Irwin, one of the Brown County representatives, wrote from Belmont (house of representatives) to Martin urging him to come down. "I expect," he says, "we shall have a hard pull for the seat of government. I have some hopes for Fond du Lac, but anticipate strong opposition from the Milwaukee delegation. They will be in favor of Cassville, I am afraid." This warning evidently disturbed the head of the "Bank of Wisconsin" but little, his eggs being nicely distributed among several baskets. At all events, Martin did not visit Belmont during the session, though he had intended to do so, possibly feeling assured that Doty, his cousin and partner in various speculations, would be able to keep the situation in hand. Perhaps, also, he felt that his interests were safe in view of the Milwaukee members' reported leaning to Cassville, the proposed western terminus of the railway from the lake. This would explain the accusing tone employed by Ellis in a letter

[13] MSS of miscellaneous bills of legislative assembly, 1836, in secretary of state's office.

to Martin dated house of representatives, Belmont, November 26, 1836, wherein he says, after describing the project which made Madison the permanent capital and Burlington the temporary one: "This measure has been brought about by an arrangement between the Des Moines and Milwaukee members, agreed to by the *Iowas* [i.e., Iowa County, or lead region members]. The idea of your Milwaukee and Mississippi Railroad[14] has had great influence in determining the question, and determining it, too, to the great prejudice of the county of Brown. The bill will no doubt become a law; unless the Executive should *veto it*; this is confidently expected by some—but I rather doubt it." Ellis also stated that Baird, Arndt's colleague in the council and president of that body, opposed the bill "with great warmth, under the supposition that Doty had the chief interest in the new town." He adds: "I do think that the most barefaced injustice has been done to the 'City of the Four Lakes,' . . . ."[15]

John P. Arndt, the Green Bay councilor who labored for Doty's schemes, was severely criticised by Baird and by Ellis, for his part in the business. Ellis

[14] Dodge on December 18, 1836, wrote from Belmont a letter to his old friend, George Wallace Jones (*Annals of Iowa*, 3rd series, iii, 389-390) which—in addition to revealing some of the governor's grammatical deficiencies, says: "Had I have placed my veto on the bill [for establishing the permanent capital at Madison] I would have acted directly in collision with a majority of the representatives of the people, and after I had agreed in my message to give my assent to the location at such point as might be agreed on by the representatives of the people, I felt bound to do so." This, in spite of previous declarations that Doty had engineered the whole business on the basis of speculation. Letter of November 16, 1836, 387, *supra.*, "Speculation and a thirst for gain seem to run into everything, patriotism and duty apparently lost sight of. I am to have all the rascally speculators arrayed against me."

[15] Colonel W. B. Slaughter of Green Bay was chief owner of the City of the Four Lakes, located on the northwestern shore of Fourth Lake, but Doty and Martin, both of Green Bay, were interested along with him. Morgan L. Martin Papers, 1835-37, Wisconsin Historical Library.

said, editorially, that it was provoking to think the measure could have been defeated "had *all* of Brown's representatives proved true to the trust confided to them."[16] Arndt defended his course and questioned the motives of his assailants.

The various projects and counter projects affecting the capital location question, disclose the lead region as the pivot on which they turned. While the representatives of Iowa County were not numerically strong enough to fix the seat of government at Cassville, Mineral Point, Belmont, or Platteville, they checkmated Dubuque in her determined effort to bear it away across the Mississippi, and Brown County, in an equally strenuous resolve to take it north to Lake Winnebago which would have been a logical move only in case the Wisconsin and Fox rivers could promptly have been made an adequate transportation route for the lead region. Evidently, their faith in a railway was superior to their faith in a canal. Despite Vineyard's defection, as a bitter personal opponent of Judge Doty, they were the central element in the winning combination which fixed the permanent capital at Madison, on the future highway and railway designed to join the fortunes of southwestern Wisconsin to the lake at the port of Milwaukee.

The location chosen was quite as favorable to the lead region as it was to the rapidly peopling district along Lake Michigan. Madison was nearly the middle point between the two most densely populated areas of that day, and being considerably south of Fox River, regarded as the northern boundary of southern Wisconsin, it was destined to remain reasonably central for a good many years.

[16] *Wisconsin Democrat* (Green Bay), December 22, 1836.

HOUSE BUILT AT PLATTEVILLE ABOUT 1837 BY REV. SAMUEL MITCHELL

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Much has been said and written about Wisconsin's capital city having been "born in corruption," and the tradition that Doty gave away to members of the legislature and even to the governor's son choice lots in the new town will not down. The known facts are that shortly after the location bill was passed, transfers of property at Madison were made by Doty to at least fifteen of the thirty-nine members of the legislature, also to the clerks of the two houses, to the governor's son, and others.[17] It is a suspicious circumstance that in all except two cases the legislators receiving them had voted favorably on the bill. On the other hand, no member of the Dubuque delegation secured a lot, so far as the search revealed, and only one of the Brown County delegation, though the Iowa County team scored heavily, as did also the Des Moines group.[18] But, even if the lots were given away as charged, it may be doubted that such gifts influenced the result greatly, for the existence of the lead region with its relatively large population, made the selection of Madison, or some other place in the Four Lakes country geographically logical.

[17] This was disclosed by a cursory examination of the index of abstracts of title to property at Madison and a part of the index of deeds. A fuller examination might show that others than those listed also received grants.

[18] Dodge did not charge that Doty gave away Madison property as bribes to the legislators. He wrote Jones a year later (December 3, 1837. *Annals of Iowa*, 3rd series, iii, 394-395): "Doty having interested several of the members of the Legislative Assembly in Madison property, as well as yourself and Augustus Dodge, he thinks it is a common interest; and he believes that interest is the great lever that governs and regulates mankind, that they have all their prices, and if they will not receive a bribe directly they can be interested in speculations which will oblige them to coöperate with him in such manner as will enable him to react on them as may suit his views."

CHAPTER VII

POLITICAL ECLIPSE

THE quarter-century which separates the inauguration of territorial government (1836) and the beginning of the Civil War, witnessed the up-growth of a commonwealth numbering approximately 800,000 people. Wisconsin by 1861 had become a well-developed community, combining many of the industrial and commercial interests characteristic of the older states with the primitive mining and agriculture of the earlier time. This development created new areas of concentration revolutionizing the distribution of political power. The master fact was the commercial advantages of the lake ports, particularly Milwaukee, their complete dominance of the trade arising from the spread of agriculture through the fertile open lands of the southeast, and their control, ultimately, through artificial means of transportation, over both the lead trade and the agricultural trade of the southwest.

Had the government, on the opening of the Upper Mississippi lead mines, promptly improved the navigation at the rapids, as Martin Thomas advocated, the demand for a railroad from Lake Michigan, penetrating the lead region, would not have arisen so early or assumed so insistent a tone, in which case river ports like Cassville or Prairie du Chien might have enjoyed at least a temporary prosperity even though another up-river St. Louis was out of the question. But the neglect

of the river, the frequent recurrence of baffling low water stages in the summer, severely handicapping river navigation, and coincidently the triumphant success of the Erie Canal for which the Great Lakes constituted a gigantic assembling basin, wove the skein of destiny for the eastern and western areas of Wisconsin. Geography and politics decreed that the lake shore should be the ruling section economically, the southwest becoming commercially and industrially tributary through the building of wagon roads and railroads.

So effectively had conditions operated to produce eastern supremacy, that by 1860 the three southern lake-shore counties, Milwaukee, Racine, and Kenosha had a combined aggregate representing nearly one-eighth of the state's total population, while the three vastly larger lead counties had less than one-eleventh of that total. Summarizing in statistical terms, the lead region (then Iowa County) had a political representation in the first territorial legislature equal to 23 per cent of the whole, and this was temporarily increased to 28 per cent in 1838, when the two counties of Dubuque and Des Moines were cut off from Wisconsin territory. The next apportionment reduced it to 23 once more, and at the end of the territorial period it stood at 18 per cent. Thereafter it declined steadily until, in 1860, the then three lead counties commanded a scant 10 per cent of the aggregate representation, which, however, was somewhat more than their relative share based on population.

This fateful ebbing of theoretical political power did not follow the precise curve representing the region's practical influence upon territorial and state politics. Throughout the territorial period the lead counties furnished more than their proportional share of leader-

ship. They held the delegateship in Congress 6 years out of the 12, the governorship 8 years, the chief justiceship 12. During the same interval were held 5 distinct legislative assemblies, aggregating 16 sessions in which the miners' representatives presided over the council 6 times and also over the house 6 times. In the first constitutional convention, of 1846, no member was more influential than Moses M. Strong, of Mineral Point, but that constitution failed of adoption. Lead region delegates were possibly not as potent in the final shaping of the constitution as were men from other sections. But when the state government went into effect, in 1848, that section provided the governor in the person of Nelson Dewey, of Grant County, and the speaker of the assembly, Ninian E. Whiteside, of Lafayette. Henry Dodge, who had just laid down the gubernatorial office, was immediately elevated to a seat in the United States Senate, the other seat being bestowed upon a Milwaukee man, Isaac P. Walker.

This impressive record hints not merely at political mindedness on the part of the electorate in the lead counties, but at a social and economic consistency alien to the experience of other sections which, like the southern lake shore, might surpass the lead region in population and wealth. If the counties of Milwaukee, Racine, and Kenosha, embracing a combined population which after 1837 always exceeded that of the southwest, and by 1850 quite threw the latter into the shade, had possessed the same social and political unity, their leaders might have assumed control at any time after the first territorial election. In comparison, however, the southeast cut a very poor figure in Wisconsin politics for a good many years, due in part to local rivalries between its several port towns, and in part to social divisions

neutralizing its numerical preponderance in population.

Partyism likewise had its influence in determining the result. The early lead miners, so largely of southwestern and southern stock, were prevailingly Jacksonian Democrats while the emigrants from the northeastern states were divided in their allegiance between Jackson and Clay. Probably the normal drift of sentiment among them would have been toward the Whig side in national politics. They were interested in tariffs, internal improvements, banks, against all of which Jacksonians fulminated howsoever prone they might be to compromise practically with the theoretical evils involved in any of those policies. Lead region politicians saw the beauty of the tariff as applied to lead, and they agreed with all frontiersmen in demanding government aid for roads, canals, and railroads. Banks, however, by the time of the constitutional convention, had become taboo.

Like all stories of dynamic politics, the history of the way leadership was wrested from the lead region is dramatized in contending personalities. The most conspicuous of these, during the territorial period, were two men we have already encountered—a pair of opposites, Colonel Henry Dodge and Judge James Duane Doty. The one represented the qualities admired by the frontier Southwesterners, the other appealed, through many aspects of his character, to the Yankee element. Dodge was uneducated, or rather self-taught through experience in military and administrative affairs, Doty was classically trained, well read, and highly skilled in the law. The one impressed himself through native insight matched by an arrogant and dominating though honest and kindly personality; the other through ease of manner, courtesy, cool assumption, and chicane.

Should savage warfare be forgot,
And ne'er again appear—
With hands upon our bosoms put,
We'll say *Dodge* shall live *here*!

A local hero who could win from his hard-boiled fellow miners an emotional loyalty such as this song implies, had some of the initial qualifications for success in frontier politics. He possessed other attributes more intimately related to problems of statesmanship, the chief of which was an intuitive understanding of motives, at least in the cases of men whose characters were not too complex.[1] Dodge won the plaudits of his frontier neighbors, also, when in 1828 he dared the government authorities to attempt to drive him away from mineral lands technically belonging to the Indians, and when later as governor he threatened to remove disturbing Indians on his "own responsibility" unless the government acted with promptness.

The feud between Dodge and Doty which broke out officially in 1836, would seem to have had its origin in personal contacts of a semi-hostile nature occurring much earlier. At all events, the Doty champions, who were fond of stigmatizing the Dodgeites as "the 'bully' party," professed to describe the first clash as occurring in Judge Doty's court years before Doty as a lobbying salesman of capital sites ran foul of the territorial governor. Dodge, so the story goes, was interested in a case at bar and wanted to watch proceedings, in which he was wholly within his rights. But when he entered with a swagger, displaying a belt decorated with bowie

[1] One illustration of this singular power was the perfect result Dodge obtained from a letter baiting John Reynolds, Illinois' ranger governor, who ridiculed the idea that the lead region stood in need of defense against Black Hawk. The narrative is in "Reminiscences of a Volunteer" originally printed as a series in the Galena *Advertiser*, 1835, extracts from which are found in the *Wisconsin Enquirer* (Madison), September 8, 1842.

knives and pistols, the judge, believing this to be a mode of intimidation, administered a stinging rebuke which the irascible colonel never forgot and never forgave. Be this as it may, Doty was removed from the bench by Jackson, Dotyites said at Dodge's behest. Yet, notwithstanding Doty's transfer of a lot in the Madison town site to one of Dodge's sons, the removal of the capital from Belmont, where Dodge had placed it, was generally described by the Doty party as the inception of the political conflict between them.

The Dodge newspapers spoke, in general terms, about "a misunderstanding between our worthy and excellent Governor, and our present Delegate in Congress."[2] This "misunderstanding" said Josiah Noonan, some were trying to dignify into a cause for marshaling all the voters of the territory into Dodge and Doty parties.

Doty issued his political challenge to Dodge when in 1838 he entered the race for delegate against Dodge's bosom friend George Wallace Jones. The latter had been implicated as second in a duel at Washington between William J. Graves, a Kentucky congressman, and Jonathan Cilley of Maine, in which Cilley was killed. This incident helped Doty's canvass in the Yankee settlements of the southeast and, uniting with that vote as he did the vote of the Fox River valley, he won. The next round in the battle also went to Doty when he was given a reëlection. Then, the administration changing in 1841, he prevailed on Daniel Webster to have Tyler remove Dodge from the governorship and to appoint himself to that office.

But the adroit wirepuller had overreached himself.

[2] See Josiah Noonan's editorial in the *Wisconsin Enquirer* (Madison), November 30, 1839.

Dodge was immediately nominated for the delegacy and elected over Doty's Whig candidate, Jonathan E. Arnold of Milwaukee. He remained in Congress four years till a new shuffle of the political cards having brought James K. Polk into the presidency, Dodge was reappointed to the governorship which he retained until Wisconsin became a state. Meantime, he had already helped to oust Doty who, in 1844, was superseded by Tallmadge of New York.

While it can be shown that Doty's career as governor was rendered peculiarly trying through the bitter hostility of the lead region Dodge partisans, still it must be said that the judge was his own worst enemy; for he conducted the affairs of the territory with a reckless disregard of popular opinion and popular rights. The result was his permanent exclusion from Wisconsin politics in the large, although he was a member of the constitutional convention of 1846 from Winnebago County, and was twice elected to Congress from the northern district. He died as governor of Utah territory in 1865.

The struggle with Doty, however, registered many counts against the Dodge party which gradually lost popularity. At the beginning of the territorial period partyism on the national basis was reprobated. It was felt the territory would fare better at the hands of Congress if its people did not advertise themselves as either Democrats or Whigs. Even Doty, in his delegate campaigns, refused to classify himself as a Whig. But in 1840, becoming convinced that Harrison and Tyler would win, he published a swash-buckling attack upon the Van Buren administration for its alleged malfeasance in connection with the government of Wisconsin territory. He professed to believe that the Harrison

administration would right Wisconsin's wrongs and announced his support of the Whig ticket. This proclamation, which created a sensation in Wisconsin, and provoked a call for a political conference, has sometimes been referred to as the first important step toward the organization of parties in the territory. It is true that as late as November, 1839, so spontaneous and prejudiced a fighter as Noonan still professed non-partisanship. But this attitude was obviously dictated by policy for there had been some party activity for nearly two years and at Mineral Point the retiring editors of the *Miner's Free Press* in March, 1841, proclaimed that they had taken hold of that paper nearly three years previously, namely, July, 1838, with the distinct object of helping to organize the Democratic party in the territory. "We repeat," say Messrs. Welsh and Plowman, "that our only boast is that we struck the first pick into the earth to break ground for the good work, and its accomplishment may entitle us 'to depart in peace.' "[3] Inasmuch as Doty, candidate for delegate to Congress in 1838, still figured as a Democrat, and commanded the support of Byron Kilbourn and other leading Democrats of the lake shore, this seems to prove that the Democrats took the first steps toward party organization. And it is significant that the beginnings were made in the heart of the lead region, by persons who were ardent supporters of Governor Dodge.

Doty himself asserted that the Dodge party was animated by a bitter determination to move the capital from Madison, where it had been fixed by the first territorial legislature, greatly to Dodge's chagrin, and to place it near the Mississippi. His supporters pointed out that neither Dodge nor the other territorial officers

[3] *Miner's Free Press* (Mineral Point), March 30, 1841.

condescended to live at the seat of government, and it was public knowledge that bills for removing it to some other place were introduced at every session of the legislature for several years; but these did not in all cases contemplate a site near the Mississippi.[4]

There is little doubt that, as Harrison Reed of the Milwaukee *Sentinel* charged, the Dodge lead miners' party vaunting their patriotic and heroic service to the territory as exterminators of the Indian menace, arrogantly tried to monopolize the political offices and dominate public affairs. Since they did this either as avowed or as putative Democrats, the rise of the Whig opposition under Doty's leadership was a challenge to the lead region on the part of the other sections of the territory. The unmeasured criticism of Doty's personal acts, as treasurer of the Capitol Building Commission, as delegate and later as governor, is explicable on the ground that he represented the opposition to a party which was fighting with its back to the wall against a political aggregation of uncertain but growing strength.[5]

The Dodge miners' Democracy suffered a severe blow in Van Buren's removal of John P. Sheldon from the registership of the Mineral Point land office. He

[4] Dodge's language, in a letter to Jones dated December 3, 1837, cited above, justifies the view that he was determined not to abide by the selection of Madison for the capital. "It can never remain within thirty-six miles of the northern boundary line of the State of Illinois."

[5] The above statement in no way excuses the high-handed and even illegal acts committed by Doty more in self-defense than in the interest of his party. His personal honesty was always a subject of debate; but he was financially too hard pressed, after the panic of 1836, to be strictly amenable either to the warnings of ethics, or the commands of law. Dodge charged that the $20,000 received by Doty as treasurer of the Capitol Building Commission was used by him for banking purposes, while the workmen at the capitol building were being paid in paper issued by the Green Bay Bank in which he (Doty) was a partner. Letter of December 3, 1837, cited above.

had received his appointment from Jackson in 1834, under instructions not to sell, either at auction or privately after the public sales, lands which had been or should be designated as lead-bearing, or necessary to mining operations, the government having adopted the policy of leasing such lands at a rental of one-tenth of the mineral produced from them. The situation was admittedly complicated, many tracts once considered lead-bearing proving in practice to be not worth working, and supposedly non-mineral lands on the other hand, frequently turning out to be rich in lead. To follow strictly the law and the General Land Office instructions would have been very unpopular and doubtless inequitable, while any deviation from them endangered the register's standing with his government superiors. The register cut the Gordian knot by adopting a rule of his own devising. He read out, at the public sale, descriptions of reserved lands together with those of the unreserved in the same townships and sections, but announced that no bids would be received on the reserved lands. By this means, he technically complied with that paragraph in the land law which prohibited the sale of government lands privately until *after* they had been offered at public sale. He next accepted private offers for these reserved lands on condition that the would-be buyer present proof in the form of affidavits that the land he wished to purchase was not mineral-bearing.

The result was what might have been anticipated. Several hundred tracts, by some held to be mineral lands, passed into the hands of private purchasers on the theory that they were purely agricultural in character. The register was denounced as a violator of law and defrauder of the government. Dotyites charged

that Democrats generally, and especially certain relatives of Governor Dodge, had been the chief beneficiaries of these irregularities from which it is not clear that Sheldon profited personally. He did, however, give Doty an opening for a crushing report against him and, after an investigation by the General Land Office, Sheldon was removed by Van Buren himself.

This was a peculiarly stinging blow, coming from his own party leader, who apparently considered him too heavy a load to carry, Doty having injected the land office scandal as an issue in the Harrison-Van Buren campaign. Sheldon, however, refused to hide his head with shame, contended that his procedure had been correct in the light of all the facts, and denounced Doty and his witnesses as personal and political enemies.[6] His view of the case, practically, was later adopted by the government when it confirmed the sales Sheldon had made.

The year 1841 witnessed the holding of conventions by both the Democratic and Whig parties, which proclaims the termination of the era of non-partisanship in territorial politics. Of course, each aggregation accused the other of precipitating the party struggle and each did yeoman service toward keeping public affairs on the plane of intense and bitter rivalry, thereby deserving the gratitude of an unusually able territorial press.

The universal abhorrence with which people outside of the lead region looked upon the slaying of Charles C. P. Arndt by James R. Vineyard in the Council Chamber at Madison, February 11, 1842, could not fail to affect the political reputation of the Dodge party to which Vineyard had nominally belonged, and when,

[6] For Sheldon's defense see *Miner's Free Press* (Mineral Point), June 9, 1840, and succeeding numbers.

after a delay of a year and a half Vineyard's trial on the charge of "manslaughter" resulted in his acquittal by a Green County jury, a storm of criticism was raised by the press everywhere save in the southwestern portion of the territory.

There were, it has been well said, in the two distinct sections of Wisconsin, two contrasted ideals of conduct among men of prominence and influence.[7] The evidence showed that Arndt either had struck Vineyard with his fist or was about to strike him, when the latter drew a pistol and shot him through the heart. Vineyard had cause to defend himself, but not with deadly weapons, which it was a gross misdemeanor to carry, concealed, in the halls of legislation. For this, the slayer was promptly expelled from membership in the council, the only negative vote on the resolution being that of Moses M. Strong, of Mineral Point, who had already been retained as defense attorney. The sober, peaceable, and religious Yankees of the southeast could not plumb the villainy of Vineyard's act and, while it must not be said that the lead region universally condoned it, there were multitudes of rough men in the mines (and it was charged that the Vineyard jury was packed with such) accustomed to carrying concealed weapons, who would not have hesitated to repel a personal attack by shooting their assailant. This explains the wide-spread sympathy with Vineyard in that region.

When this case was before the public—and was being used to make political propaganda—some recalled the story about a chambermaid in a Milwaukee hotel finding a bowie knife under the pillow of a bed last occupied by Colonel Henry Dodge. Yankeeland had

[7] Cf. Quaife, "Wisconsin's Saddest Tragedy," *Wis. Mag. of Hist.*, v, 264-283.

been scandalized by the discovery that the old hero went about with such weapons on his person, but his supporters excused him on the ground of old established habit. He was exemplifying one of the least lovable characteristics of frontier Southwesterners.

The trial of Vineyard occurred in October, 1843. Four years later Moses M. Strong, his legal champion, was a candidate for delegate in Congress on the Democratic ticket, his opponent being John H. Tweedy, of Milwaukee. Strong made a vigorous, persistent canvass. Tweedy did nothing to further his own cause. It began to look as if Strong would win when Democratic voters of Kenosha County headed a general revolt against him. The result was an inglorious defeat for this lead region, Dodgeite Democrat, whose personal habits at that time respecting strong drink were severely criticized by the southeastern Yankees and whose connection with the Vineyard case had not been forgotten. His agency in shaping the 1846 constitution, which the people had rejected, was an added count against him.[8]

The Whig cause was looking up. The universal desire for and need of internal improvements, especially lake harbors and the removal of the rapids in the Mississippi, forced Wisconsin people to think along the lines of the Whig program. There is reason to believe the Democrats who were whipped in the constitutional election of 1847, would have lost control in the first state and national elections but for the enfranchisement of non-naturalized aliens. This move Moses M. Strong forced through the first constitutional convention and

[8] Racine, Rock, and Walworth counties—Yankeeland—gave large majorities against it. Strong had, however, joined the Legislative Temperance Society in 1843. In later life he was known as a man of great personal dignity and exemplary habits. Testimony of William P. Gundry and others.

the opposition party, when it came into control of the second convention, did not dare to rescind the action then taken, which resulted in adding a large body of new voters, particularly in the lake-shore counties where immigration had been most active. These voters, at least the Irish and Germans, recognizing their obligation to the Democratic party, supported it with approximate unanimity. It was this, probably, which enabled the Democrats in the spring of 1848 to organize the state government, and which guaranteed a plurality for Cass in the fall election.

The lead region, however, was no longer safely Democratic. Though making less spectacular strides than the lake shore, it also had been transformed before 1860, showing in that year more than ten times the population recorded for Iowa County in the census of 1836. This result was due to no large scale commerce, or to the colonizing of manufactories, as in the eastern area, but mainly to the influx of agricultural settlers and the normal growth of towns and villages depending on the farming trade. The fact justifies the importance which writers like Schoolcraft assigned to the excellence of the farming lands in the lead district. The missionaries, also, who began to interest themselves in this country about 1829, built their hopes of a permanent orderly and moral society on the secure belief that a great immigration of eastern people would soon arrive to spread as farmers over the fertile prairies and open valleys of the southwest.[9] The process, deliberate at first, gained momentum with the years and when, in 1846, the government at last decided to sell the reserved

[9] Letters of Rev. Aratus Kent, John C. Holbrook, Zenas Eddy, John Lewis, *et al.* MSS in Hammond Library, Chicago Theological Seminary. Photostats, Wisconsin Historical Library.

lands, the immigrations came in the proportions of a rush. But, of this later.

By that time Grant County, with a large admixture of eastern people and of foreigners, and under the effective propagandism of the *Wisconsin Herald*, had departed from the Jacksonianism of the earlier lead-mining era and become Whig in its political principles. It accordingly chose Whigs to represent it in the two constitutional conventions, and gave Tweedy a considerable majority for delegate in Congress. Iowa and Lafayette counties gave majorities for Strong and sent Democrats to the conventions.

So well confirmed was Grant County in its political course, that in the spring of 1848, when the question of a state ticket was up, the Democrats regarded it as the strongest Whig county in Wisconsin and, on the "availability" principle, took Nelson Dewey of Lancaster as their standard bearer.[10]

But they had figured without their host, for John H. Tweedy, of Milwaukee, the Whig candidate, carried the county by a vote of 1,467 against Dewey's 1,199. In the fall election Grant County went strongly for Taylor, Iowa favored the old military hero by a narrow majority, and Lafayette reasserted its democracy in a small majority for Cass. None of these three counties showed much tenderness toward Van Buren for whom Yankeedom (Racine, Walworth, and Rock) gave huge pluralities.

The lead region as a whole including northwestern

[10] The senatorial question may have affected the result also, for Judge Charles Dunn, Dewey's father-in-law, was an aspirant for the seat which finally went to Henry Dodge after "a spirited contest" as the *Wisconsin Democrat* (Madison) says, June 17, 1848. The paper praised Dewey as a Democrat who had usually been successful in overcoming the Whig majority in his own county—more successful than Tweedy had been in Milwaukee. April 29, 1848.

Illinois, was stampeded for Taylor. With some the reason may have been personal, for the character of "Old Rough and Ready" appealed to many of these people, especially when so colorful and dramatic an orator as Edward Dickinson Baker presented his cause to them. Baker was the successful Whig candidate for Congress in the habitually Democratic Galena district, and he extended his propaganda into Wisconsin, speaking at Lancaster and elsewhere with telling effect. But the great argument which swung the lead region vote against Cass was internal improvements. The Whigs all through the West made that the main issue. In Wisconsin their convention resolved: "That the total disregard of the administration of James K. Polk of the claims of our western people upon the general government for appropriations for harbors upon our lake borders, and for the improvement of our western rivers, while it merits the decided condemnation of every citizen of the West, teaches us the necessity, if we would secure protection to our western commerce, and facilitate the transportation to market of our western agriculture, of electing to office Whig candidates upon whom the West can rely for carrying out these measures of internal improvement so indispensable to their prosperity."

There is nothing on the tariff, on banks, or any other specific question. The Harbor and River Convention held at Chicago in the summer of 1847, on the heels of Polk's veto of a bill on that subject, had crystallized for the West the issue of the campaign. And nowhere in the Upper Mississippi valley was that issue more potent than in the lead region, for that country had reached an economic crisis. "The Northwest is lagging," cried one of their leading editors. "The world is running away from us." And in the same issue a prominent local

writer[11] declares that the equilibrium between the mining demand for foodstuffs and the agricultural supply has been broken down. "Farmers can no longer sell a tithe of their products to the miners and are therefore without a market. We need annexation to the lakes; some access to the markets of the great world." Miners and farmers felt this situation with equal poignancy.

Wisconsin Democrats were keenly alert to the force of the internal improvements argument, and Governor Dewey, in his first message to the legislature, stressed the need of harbors on the lake and the improvement of the Mississippi at the rapids. He recommended a memorial to Congress on that subject. The party editors tried to insist that quite as much might be hoped from Cass as from Taylor but they found stumbling blocks in the Baltimore platform's declaration which Cass made his own, that such improvements were unconstitutional, and also in his refusal to attend the Chicago Harbor and River Convention. He was not the man, therefore, to captivate lead region voters. Scott, in 1852, was so weak a vote-getter that the three lead counties were all lost to Pierce, though the majorities were small. But four years later Grant cast a huge majority for Frémont, which with Iowa's narrow plurality, gave the "Pathfinder" a lead of about 1,100 over Buchanan despite Lafayette's unwavering devotion to Hunkerism.[12] The 1860 election had a similar result, though Iowa gave a clear and decided majority for Lincoln and Grant an overwhelming one. Lafayette

[11] Joseph T. Mills in *Wisconsin Herald* (Lancaster), June 10, 1848.

[12] The vote stood:

Grant County	Frémont 2,809	Buchanan 1,419	Fillmore 186
Iowa County	Frémont 1,497	Buchanan 1,474	Fillmore 27
Lafayette County	Frémont 1,415	Buchanan 1,722	Fillmore 19

Tribune Almanac (New York, 1859), p. 61.

gave a Douglas majority of about 100 and cast 47 votes for Breckinridge, who received 46 in Iowa and 33 in Grant.

The lead counties, taken as a unit, treated Dewey well in the gubernatorial contest of 1849, though his own county, Grant, was adverse; and the same conditions were repeated in 1851 when Farwell, Whig, was the successful candidate, and in 1853 which witnessed the triumph of that clever Democratic politician, William A. Barstow. He won a majority again in 1855, notwithstanding the staunch opposition of Grant County, as did also Randall's Democratic opponent in 1857. But in 1859 Randall carried both Grant and Iowa by such large majorities over Hobart that Lafayette, still safely Democratic, was easily overwhelmed. It will be observed that, after Dewey, none of the gubernatorial candidates of this period represented the lead region, whose day of political dominance was done.

CHAPTER VIII

CONDITIONS OF LEAD MINING

MINING for lead, like washing gravel for gold or grinding ore taken from mountain lodes, was long a precarious speculative industry. Success depended so largely on a "rich strike," which was considered a matter of luck, that primitive miners were apt to regard their business as being related to astrology no less than geology. Still, in prospecting for lead the majority looked for "signs" on the earth rather than let themselves be guided wholly by conjunctions of the stars.

The prospectors of the lead region charted the whole area within a very few years. This is in harmony with the history of mining; men's eagerness to explore where a rich discovery has been made accidentally or otherwise, induces so rapid a multiplication of experimental efforts that the productive field in the given neighborhood is quickly outlined. Although white miners were still rare in the Galena area in 1820, they had scattered in less than ten years over the whole lead region from Apple River in the south to Blue River in the north and from Hackett's in the western part of Grant County to Exeter in Green County and Moundville in Dane. R. W. Chandler's map published at Galena in 1829,[1] outlines the lead-bearing section as a whole and shows with much definiteness the distribution through it of the

[1] *Wis. Hist. Colls.*, xi, op. p. 400.

special districts to which we now know that profitable diggings have always been restricted.

All of this prospecting was done by practical men, with little or no aid from professed mineralogical experts. The first scientific reconnaissance of the region was by David Dale Owen, government geologist in 1839, whose report contains a map which may be profitably compared with the Chandler map of a decade earlier.[2] Owen simply recorded what the prospectors and miners had found, adding his own explanation of the phenomena—and this explanation, while in part passing muster with later and more leisurely scientific explorers, has been largely set aside as erroneous or inadequate.[3]

The miners had found that the ore they sought, which was sulphide of lead, occurred usually in veins, and that these veins were in that portion of the stratum which they called *cliff limestone* but which later geologists called *Galena-Trenton limestone*, and finally *Galena-Platteville*. The mineral-bearing veins, they learned, when present, commonly did not appear singly but in groups; they often ran parallel to one another, and their most usual course was nearly east and west, with occasional "north and souths," and fewer quartering ones which they called "ten o'clocks" or "four o'clocks" from their position with relation to the sun at those hours. A chain of related veins they called a "range," and the network of veins and ranges in a given

[2] 28 Cong., 1 Sess., *Senate Documents*, no. 407 (serial no. 437) contains Owen's "Report of a Geological Exploration of Part of Iowa, Wisconsin, and Illinois. . . ." I call Owen's the first scientific reconnaissance because the cursory journey of George W. Featherstonhaugh across these counties in 1836 cannot be dignified as a scientific reconnaissance—even if we accord the author of *A Canoe Voyage up the Minnay Sotor* the title of scientist.

[3] See *post*, Appendix II.

locality was the "Diggings"—New Diggings, Hardscrabble Diggings, Hamilton's Diggings, etc. Such neighborhoods are now called mining districts. The Chandler map already referred to, simply records what the prospectors had accomplished, and in their own terms, lays down in the area between the Illinois line and the Wisconsin River some two dozen Diggings or centers of mining activity. These include the historic districts—Hazel Green, New Diggings, Gratiot's Grove and Shullsburg, Hamilton or Wiota, Fair Play, Platteville, Willow Springs, Mineral Point, Dodgeville, Moundville, Beetown, Spring Prairie, Potosi—though some of the names of places noted are of later date.

It is clear, therefore, that, as in the oil regions, private initiative in experimentation defined the productive areas. After a certain date, which could not have been later than 1839, and may have been as much as ten years earlier, random digging had wholly ceased and lead mining was restricted to definitely circumscribed localities within the general lead region. Not that all the leads (lēds not lĕds) in each of the favored localities had as yet been made known, but their boundaries were recognized and all activity confined within them. Nearly always when in the period after 1840 a new discovery was announced, it was in one of the recognized old production areas like Mineral Point, Beetown, Potosi, Hazel Green, not in a new one.

The circumstances contributing to the prompt identification of the districts were mainly two: signs of previous Indian diggings, and traditional prospectors' wisdom derived from the Missouri mining field to some extent and also from the Dubuque mines situated similarly to our own. The first big strike was made in the Buck Lead, rented from the Indians by Colonel James

Johnson in 1822. This, and the Cave Lead also leased by him, had been worked by the Sauk and Fox squaw miners for some fifteen years. In 1819 they had discovered in the Buck Lead the most famous nugget ever taken out of the ground in the lead region. It was so large that the whole band of Indians was required to move it. In many other places the prospectors were guided by Indian mining signs such as the side hill earth furnaces and the inclined planes descending into shallow lodes which had been worked by them. The mines west of the Mississippi, having been operated many years by Julien Dubuque, with whom a few other white miners collaborated (though he employed mainly Indian labor) the more obvious conditions under which leads could be discovered were known by common report; and the Missouri experience which so many of the early prospectors had acquired, while not strictly applicable in the new region, was not without its value as a sharpener of the faculties of observation.

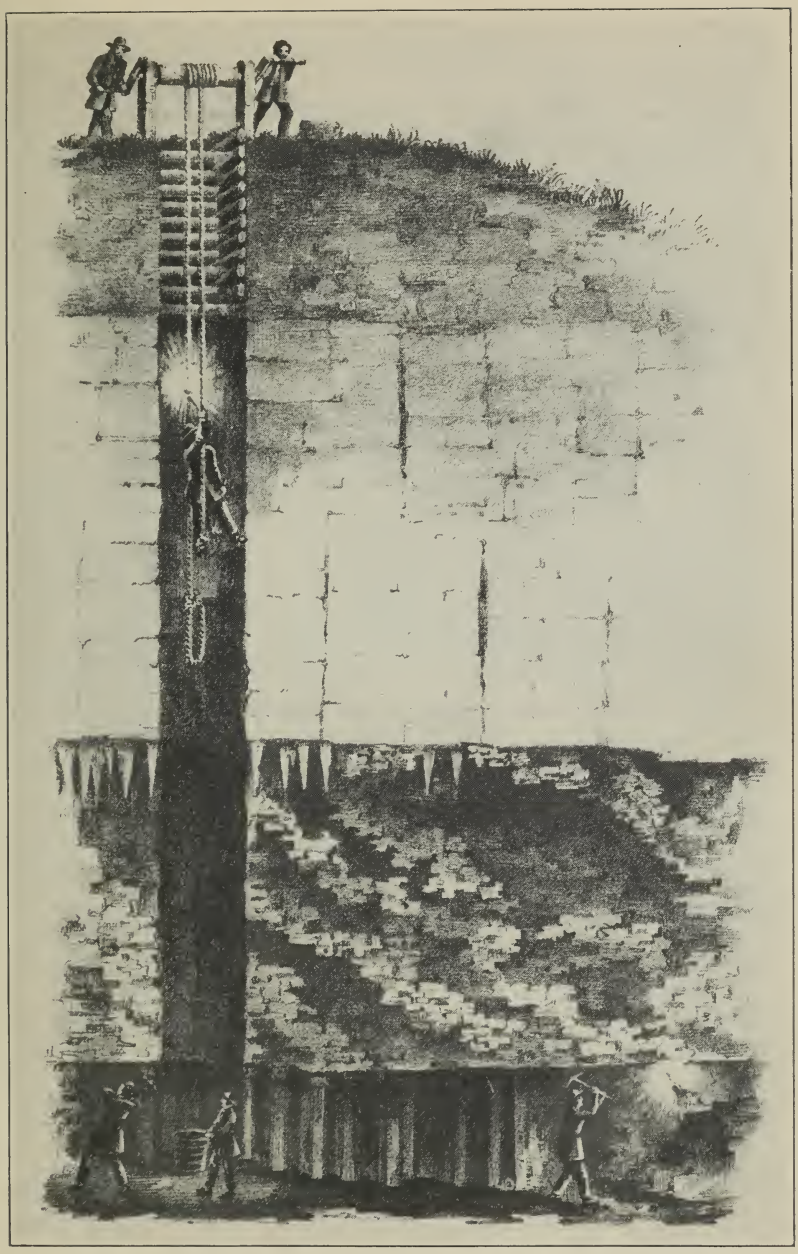
It was the keen eye rather than scientific training which produced results. To be sure, superstition prevailed among the miners to a great extent and the insinuating arts of the witch doctor were probably responsible for more resultless perforations of the earth than the misreading of actual "mineral signs." But the discovery of float mineral on or near the surface, the noting of a slight linear depression in the earth, an extraordinary line of vegetable growth particularly the "masonic weed" supposed to run its roots, sometimes fifty feet long, down into the mineral of the veins beneath, sink holes, springs issuing from hillsides at proper levels to suggest fissures in the lead-bearing strata, and a peculiar conformation of hill slopes—all exercised a

powerful charm over the prospector mind and were apt to induce a feverish search for hidden treasure.

The hope in all trial digging was to sink the shaft, an ordinary well in appearance, directly into the vein and thus strike the mineral. That happened in the numerous cases where veins were identified from surface signs and when it did, the miner could begin to drift or tunnel in two directions along the course of the vein as soon as his shaft had been sunk to the proper level. His equipment was an ordinary two-handed well crank or windlass, fixed upon posts set firmly one on either side of the four- or five-foot-wide opening of the shaft. With a rope of proper strength and length, to which was attached a heavy wooden bucket or tub, the earth was drawn out as digging proceeded. As the tunnels lengthened, the mineral would be wheelbarrowed to the foot of the shaft for hoisting to the surface. The shaft was timbered where necessary to prevent caving, and in the tunnels pillars of the rock were left at intervals to support the roof. The miners wore heavy shoes, felt hats, hickory shirts, and "wamuses" (jackets) and overalls made of bedticking. For lighting the mines they used candles set in gobs of fire clay which would adhere to any part of the rock wall in any situation. Their tools were the shovel, pick, gad or crowbar, the hand drill, and blasting powder.[4]

When the shaft failed to enter a lead-bearing fracture, the drift would be directed so as to strike a vein within the shortest distance by running at right angles to the general trend of fractures in that region. Usually this was east and west, wherefore the miner would

[4] Many of the above descriptive items are presented to the eye in plate ix, Owen's "Report of a Geological Exploration . . . ," 1844, cited above. For the dress of miners see John Steele, *Across the Plains in 1850* (Caxton Club publication, Chicago, 1930), chap. i.



CROSS SECTION OF A LEAD MINE

From the Report of David Dale Owen, 1839

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drift north and south to strike a vein. If he succeeded he would then tunnel along the vein as in the previous case. His mine would have an "elbow" in it, but this was after all a mild complication, for many veins were themselves very irregular in outline, not always perpendicular, rarely free from sharp turns, cross joints, pockets, flat extensions, or pitches. Often the mineral was found in distinct, separated zones, and the tunneling had to be done at several different levels.

The lead sulphide ("mineral" or galenite) was commonly found in combination with zinc sulphide ("blackjack") and with a derivative mineral zinc carbonate or "dry bone." The scientific names for these three products are *Galenite*, *Sphalerite*, and *Smithsonite*. The early lead miners were concerned only with the first, casting away as worthless the subordinate but often considerable quantities of Sphalerite and Smithsonite. Pure lead ore contains 86.6 per cent of metallic lead. It was rarely found in its pure state but in conjunction with varying amounts of lead carbonate, gypsum, or other derivative or associated mineral, a very little silver, iron, copper, and of course, sulphur. The lead crystals occur in a matrix or gangue of calcite, dolomite, barite, or fluorite.[5]

The scientific explanation of the phenomena above described cannot be detailed here with particularity, but a brief summary based on the works of Chamberlin and Van Hise must be given in order to render them intelligible to the non-scientific reader. The scientific reader is referred to the geologist's account in Appendix II.

The veins or lodes described as the deposits of lead

[5] T. C. Chamberlin, *Geology of Wisconsin* (Madison, 1882), iv, 379. But compare Paul A. Schafer, Appendix II.

mineral are merely such openings as may occur anywhere in the "zone of fracture" of the earth, particularly in the brittle limestone strata. These openings have no relation to the origin of the lead deposits, save that they happened to be available for them when the concentration of lead ore occurred. The origin of the fractures is lateral pressures due to the shrinking of the earth's crust, but many of the cracks and gashes were later enlarged by the action of water, as in the process of cave building.

Lead, one of the component minerals out of which the earth is built, like copper, silver, iron, and the rest, is normally so diffused through the rock that there is no possibility of its profitable extraction therefrom. Only in cases where it has become concentrated up to a certain point do we have a lead-mining opportunity. Since the lead is found in sedimentary rocks, formed under the sea, it must either have been derived from those rocks, in which it is now found concentrated, or been intruded into them by some means as, for example, volcanic action. Several of the earliest geologists, including James Gates Percival, believed the deposits of lead to have been derived from below, and urged deeper diggings to test their theories, which naturally flattered the miners with the hope that their riches had as yet been "only scratched" and led to legislative propaganda to have the state sink experimental shafts to much lower levels than existing ones had attained. But the later scientists named above, Chamberlin and Van Hise, give an explanation of the occurrence of lead mineral which excludes the hypothesis of vulcanism within the region itself.

They concede that the first concentration of diffused lead mineral was probably caused by vulcanism, igneous

rocks being especially rich in that element. But this force operated at a great distance, creating the mountain masses which rose from the sea, first as islands, especially the Laurentian range. When in the course of geologic ages the igneous rocks of this range were dissolved away in eroding waters, sea currents carried a specially large proportion of the lead element in solution and spread it over that portion of the sea floor in which the Galena limestone of our lead region was being formed, and where the marine animal life that builds limestone caused its precipitation.

The resulting Galena limestone therefore became richly impregnated with lead mineral which was still but indifferently concentrated, and the stratum itself, insulated by the relatively impervious layer of Cincinnati shale above and the oil-rock or Trenton shale below, was itself buried under a thick stratum of Niagara limestone which was not lead-bearing. The dissolving element, water, could reach the Galena stratum only after the overlying rocks had been eroded away, which, because the strata rise gradually from the Mississippi border to the center of the state, took place earliest in the northern and eastern portions of our area.

As soon as the Galena strata were opened to the reception of the waters, percolating ground waters began to carry the mineral in solution to the rifts, fractures, or veins in the rock. The process was a double one, thinks Van Hise.[6] At first, the water entering an exposed area of the Galena took a downward course, moved along the incline of the strata to large openings or veins, and therein ascended, precipitating much of

[6] Charles R. Van Hise, *Some Principles Controlling the Deposition of Ores* (1900), especially 118-124. Later researchers have modified in some respects the theories of Chamberlin and Van Hise and one can say there is as yet no real agreement.

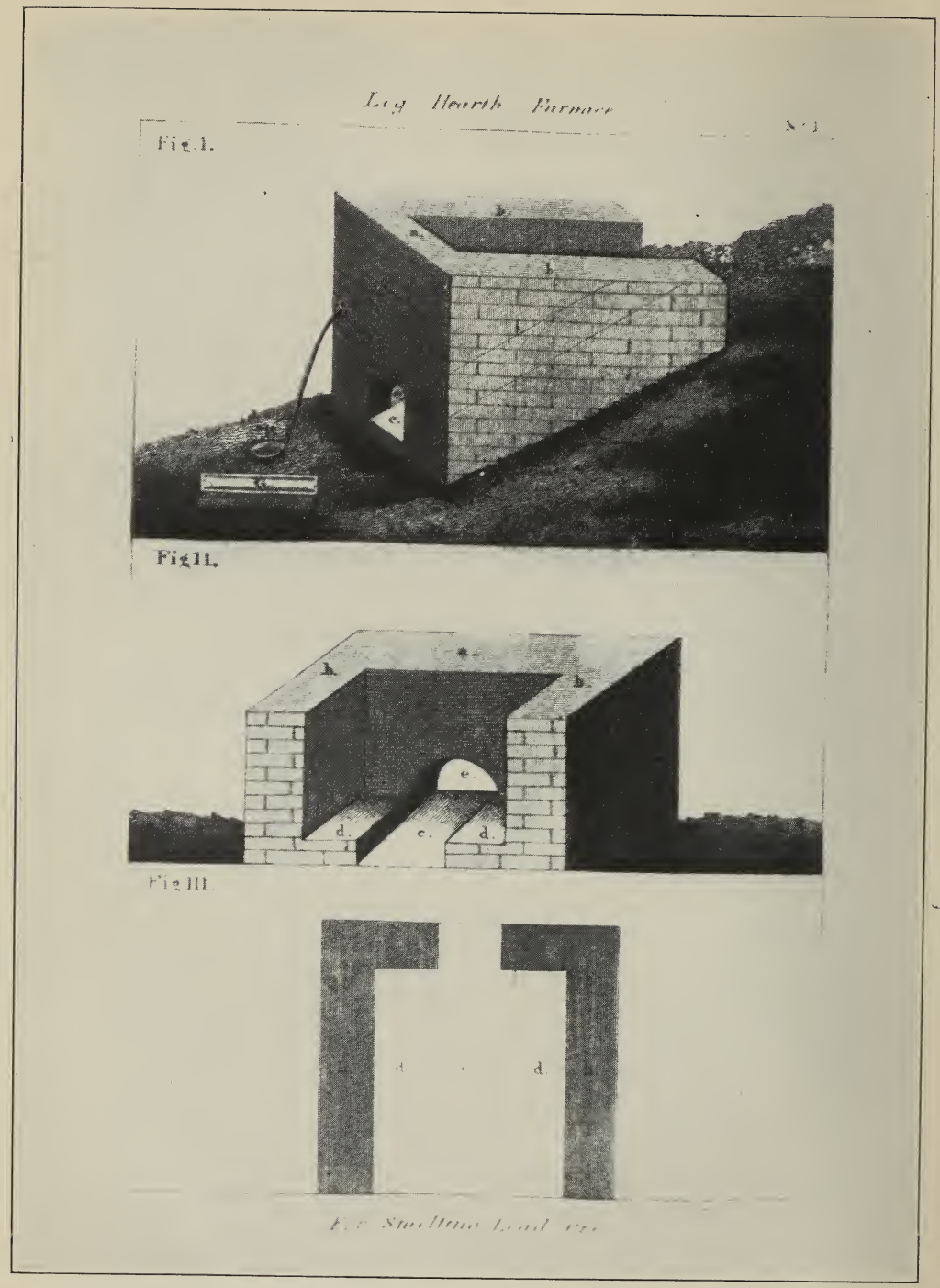
its load of mineral under the influence of conflicting currents, of oxidation, and of exposure to rock surfaces. Later, the exposed area having become enlarged through the progress of denudation, until the Galena limestone was just under the surface throughout the lead region (except where caps of Niagara remained in a few mounds), descending currents of ground water produced a new concentration in the veins. It would seem as if the two processes must have been largely simultaneous. The principles of physics and of chemistry are appealed to, to explain the order in which the several minerals appearing together in the lodes are laid down.

Chamberlin[7] thought he had found reason to believe that the productive districts were situated in minor synclines embraced within the great anticlinal rock cover of the Wisconsin lead region. Other geologists doubt this conclusion. All unite in condemning as unsound the theory of "belts" of lead districts advanced in 1871 by John Murrish, commissioner of the survey of the lead region.[8] Chamberlin's detailed map showing districts and leads, with their approximate lengths and directions, is the best answer to such a bizarre theory. The appearance of the mining districts within the region has not yet received an adequate explanation, a fact to which geologists on the whole agree, and which has no great practical importance since presumably all of the districts have long since been fully identified.

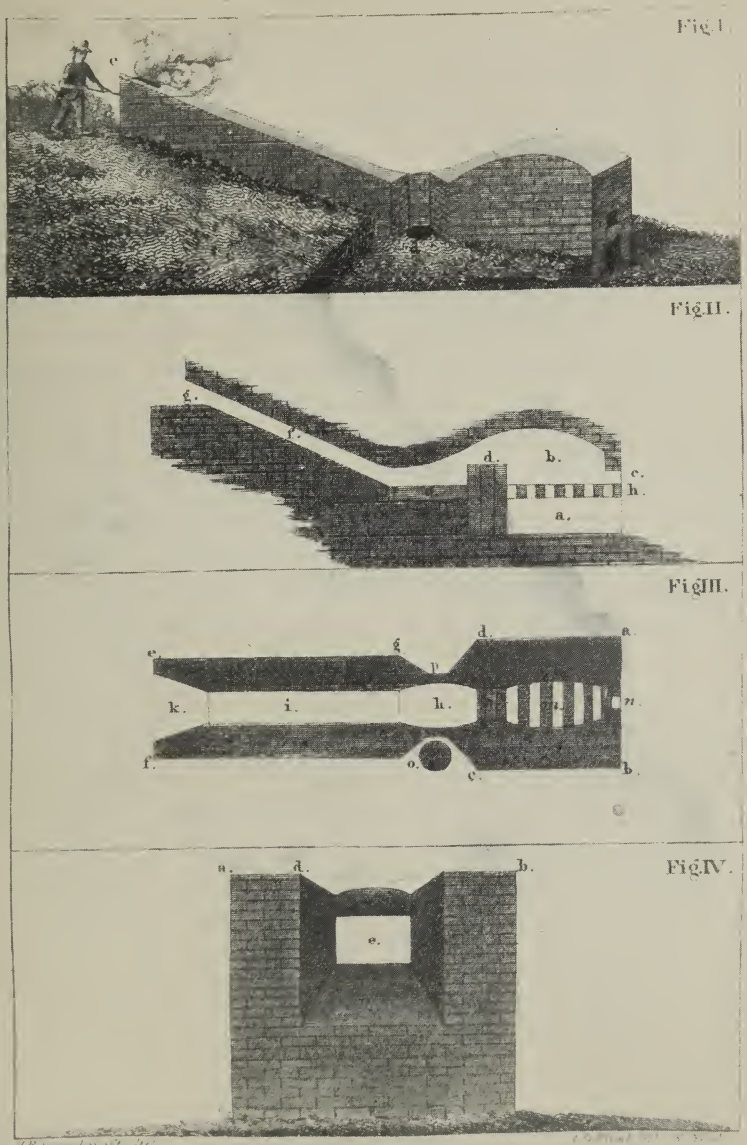
Returning now to the miners themselves, the next process, after hoisting the mineral out of the mine was to smelt it in order to complete the concentration of the lead, making it pure. This was done in a variety of ways. The earliest type of furnace was that probably

[7] *Geology of Wisconsin*, vol. iv.

[8] See his *Report on the Geological Survey* printed by the state.



From Schoolcraft's *View of the Lead Mines of Missouri*



From Schoolcraft's *View of the Lead Mines of Missouri*

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derived by the Indians from the French, a hopper-like excavation in a hillside, with a trench leading from outside to the bottom of the hopper, and connecting at the outer end with a shallow bowl-shaped depression in the earth to catch the flowing lead. Across the lower part of the excavation were laid at intervals narrow stones, forming a kind of grate. On this small logs were placed, with a charge of mineral above them. The trench, filled with quick-burning light wood was fired and when all was burned out a "plat" of lead weighing perhaps sixty pounds would be found in the receptacle prepared for it. But much the larger part of the mineral was left in the refuse. Sometimes this was resmelted under better conditions at a large profit. Dr. Moses Meeker tells of an Indian trader, Anderson, who in 1822 was buying the waste of Indian furnaces, resmelting it on an island in the Mississippi, and realizing handsomely from the operation.[9]

The log furnace was a great improvement over the Indian smelting pit, save that it was apt to be impermanent. It was a hillside structure of three walls enclosing all but the upper side of a parallelogram 8 feet long and 4 wide, the walls being 2 feet thick, the low side 7 feet high, the others varying from 7 feet at their low ends to 3 feet at the other, the slope 45 degrees. Down the center of the enclosed slope the floor had a hearth 2 feet wide and 8 feet long. On either side of the hearth was a ledge 10 inches high and 1 foot wide, while at its lower end the wall was pierced for a round arch the width of the hearth and springing from the ledges. This was the "eye" of the furnace. Against the wall, below the eye, was a receptacle hollowed in the ground

[9] "Early History of Lead Region of Wisconsin," *Wis. Hist. Colls.*, vi, 272.

to receive the lead which flowed through the eye and was ladled with an iron dipper into the iron pig lead moulds. Large oak logs, 4 feet long, resting on the ledges made a bed for the mineral. Before this was put in, small sticks of firewood were set up on the logs against the three stone walls. The furnace was then charged with mineral until full, when other logs were placed over it from back to front, completely enclosing the mineral with wood. The charge was now fired from the hearth and in about 24 hours with careful stoking the blast would be completed and some 50 or 60 per cent of its lead content would be in pigs neatly corded. These log furnaces were often built in batteries of 2 or 4, which reduced the cost of construction and also of operation. The slag, or lead ashes, was again smelted, after a washing process, in an "ash furnace" which was a much more complicated apparatus. Both types of furnace are described and illustrated with exact measurements by Henry R. Schoolcraft.[10] It was said that the Gratiots of Gratiot's Grove at one time operated 9 of these furnaces.[11]

The drawback to the use of the ordinary log furnaces, built out of the native limestone, was that the stone would be quickly reduced to lime under the intense heat generated in smelting. If built of a good quality of fire brick, they lasted a long time and did good service. Still, their efficiency was far below that of the reverberatory furnace, which was invented by Robert A. Drummond of the Galena district at least as early as 1836.[12] This was much more complicated, more costly

[10] *View of the Lead Mines of Missouri*, 94-100.

[11] Elihu B. Washburne, "Henry Gratiot," *Wis. Hist. Colls.*, x, 246. Also *Harper's New Monthly Magazine*, xxxii, 681-696.

[12] Thwaites, "Notes on Early Lead Mining," *Wis. Hist. Colls.*, xiii, 276. Dubuque *Visitor*, November 9, 1836.

to build, but if well constructed served for a long period. It saved a much larger percentage of the lead than could be husbanded through the use of the log furnace, supplemented by the ash furnace, and in comparison was very economical of fuel. Drummond's invention, based on the English cupola furnace, was a device which caused the fire to pass over the top of the charge of mineral as well as the bottom, swathing the ore in living flame so to speak. Toward the end of the year 1836, there were 5 such blast furnaces in operation near Dubuque, 1 of which smelted 100,000 pounds of pig lead per week, 2 others each 70,000 pounds, and 1 other 60,000 pounds.[13] The power used in driving the bellows was usually some small waterfall, as was the case at Parish's near Montfort.

Some lead operators followed British practice in constructing cupola furnaces. But the Drummond blast furnace quickly became the favorite throughout the district. David Dale Owen, whose reconnaissance of the lead region was made in 1839, speaks of it as a recent improvement.[14]

The Drummond furnace was superseded in turn by the Scotch hearth blast furnace, which in 1866 was said to be in almost monopolistic control of the lead field.[15] This was a massive cast-iron box, 2 feet square, 1 foot deep, the walls and bottom 2 inches thick. It was fitted with a hearth or "work stone" which sloped downward from the front edge of the iron box. The hearth had an inch high ledge along its sides and a diagonal groove down its course, leading to the melting pot outside the furnace wall. A blast pipe 2 inches in diameter entered

[13] Dubuque *Visitor*, November 9, 1836.

[14] "Report of a Geological Exploration . . . ," cited above, p. 42.

[15] *Harper's New Monthly Magazine*, xxxii, 681-696.

the smelting box 1 inch above the bottom, the bellows being worked by a water wheel. A mighty chimney, 30 to 35 feet high, 10 feet wide at the base and tapering upward, was built over the furnace box to insure a powerful draft of air. The mineral, sorted and washed, was placed in the furnace mingled with light wood, coke and charcoal. This was lighted, the blast turned on and a steady heat produced which the sulphur of the mineral, in the process of combustion, intensified. The molten lead flowed down the hearth to the melting pot, whence it was ladled into the pig moulds. A blast completed, the residue in the furnace was drawn out on the work stone, a new charge of fuel and ore placed in the box, the imperfectly smelted portion of the preceding blast mingled with it, and the process repeated. This first smelting in the Scotch hearth furnace was supposed to garner 68 per cent of the lead contained in the ore. But the slag was left to be treated in a slag furnace built by the side of the other and operated with the aid of the same blast. It was a huge box, built of stone lined with fire clay, open at the top and fitted with a heavy cast-iron perforated door in front through which the molten material flowed. This was of two kinds, lead and slag. The residue of the lead, being heavy, would fall directly down into the receptacle placed to receive it; the slag, a light substance, flowed over the lead pot and falling into a vessel partly filled with water, was cooled and taken out in the form of worthless scoria.

Such a battery of furnaces as we have just described sometimes made as high as 4,000,000 pounds of lead per year.[16] The Scotch hearth was the most economical furnace thus far used, requiring less fuel than the

[16] This was said of Hughlett's furnace. *Harper's New Monthly Magazine*, xxxii, 692.

ROASTING FURNACE AND ACID PLANT, CUBA CITY, 1928

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Drummond and far less than the log furnace. The pre-Civil War period witnessed nothing of that interesting development of great plants for grinding, milling, and concentrating ores which has characterized the recent mining period.[17]

Enormous variations occurred in the returns for mining. Sudden enrichment was not uncommon. The case of John Bonner and the Hazel Green mine is in point. Bonner in 1824 struck an old Indian diggings, began work, and in a few feet found "block mineral." The first day he took out 17,000 pounds and in a short time had 100,000 pounds on the bank which to him was wealth. The next year Moses Meeker took from the same lead 150,000 pounds. A third fortune was taken from it by Jefferson Crawford. Many years later it was reported that the Rountree lead at Hazel Green was yielding 125,000 pounds of mineral per day.[18] New Diggings, where work was also begun in 1824, proved extraordinarily rich too.[19] Near Dodgeville was a lead which, in 1848, was reported as yielding 10,000 pounds per day.[20] When 150 pounds per worker per day was considered a good average yield, the taking of thousands of pounds at the value of $19 or $20 per thousand ran into money at a fabulous rate. One group of 8 men, in 1845, raised mineral in a single day which was worth $1,210.[21]

In 1837 it was reported from Mineral Point that several half quarter-sections of land purchased as non-

[17] For descriptions of these see Clarence A. Wright, *Mining and Milling of Lead and Zinc Ores in the Wisconsin District, Wisconsin* (United States Bureau of Mines, *Technical Paper*, no. 95, 1915).

[18] *Wisconsin Herald* (Lancaster), January 15, 1848.

[19] Meeker, *Wis. Hist. Colls.*, vi, 293-295.

[20] *Wisconsin Tribune* (Mineral Point), April 14, 1848.

[21] *Weekly Northwestern Gazette* (Galena), October 17, 1845.

mineral-bearing at the government price of $1.25 per acre, through the discovery of rich leads upon them had become worth from $10,000 to $30,000.[22] New discoveries were made from time to time and every particularly promising one was heralded far and wide. For example, in 1856 the papers announced rich new discoveries on land owned by J. H. Rountree near Platteville. A shaft only 25 feet deep, without drift, uncovered chunk mineral in a vein 12 feet wide, some of the chunks weighing from 500 to 700 pounds.[23] A few months later, a "tremendous lead" was discovered at Beetown where the ore lay solidly in a mass 2½ feet wide and 5 feet thick.[24]

The above examples, selected from reports covering about thirty years of the lead-mining history, illustrate the normal (or shall we say the abnormal) means of stimulating interest in prospecting. Human nature could not resist the appeal of such stories, the consequence being that every fresh report of a big strike was apt to be followed up by an epidemic of shaft digging, by miners and farmers, throughout the known lead-bearing localities.

The great majority of the leads opened by prospectors were soon worked out, or the yield was so diminished that it did not pay for working. Mining methods, to be sure, affected that question, and it is said the coming of Cornish miners beginning about 1835, at a time when many American miners were ready to quit, gave a new impetus to lead mining, the Cornish being more skillful than their predecessors. Then there was the irritating problem involved in leasing the lands. The govern-

[22] *Miner's Free Press* (Mineral Point), July 28, 1837.

[23] *Independent American* (Platteville), February 23, 1855.

[24] *Ibid.*, August 8, 1856.

ment, having adopted the leasing policy, adhered to it through inertia despite its complete breakdown, which occurred as early as 1835. It was not until 1846 that Congress, under President Polk's urgency, passed a law for the disposal of the reserved lead lands which were sold, mainly to the miners who had developed them, in 1847. The leasing policy cost the government many thousands above what it received in the value of rent lead.[25] It also alienated the good will of citizens in the lead region as is shown by numerous incidents. For example, a Grant County jury, trying a damage suit brought by the government against Antoine Lore for mining lead on public land without a license, found for the government as the law compelled, but awarded damages of five cents instead of the $20,000 claimed.[26]

A prime cause of lead-mining decline, which began after 1847—the peak year—and became marked by 1860, was the ever-increasing cost of operating the mines at the lower levels. And, when the water table was reached, a condition already affecting many of the principal diggings by 1860, a complete revolution in mining methods was indicated.[27] Then pumping machinery would have to be installed to clear away the water, or the mine would have to be drained by drifting from a lower level which was sometimes possible though both methods required a large expenditure of capital. In many cases drainage called, also, for community or

[25] In his first annual message, December 2, 1845, Polk shows that the rents of lead land for the years 1841, 1842, 1843, and 1844 aggregated $6,354.74, while the expense of their management cost $26,111.11. He recommends their sale like other public lands.

[26] *Grant County Herald* (Lancaster), December 2, 1843.

[27] Occasionally the water would be lowered by the use of a syphon, as was the case in James D. Noble's mine at New Diggings in 1838. He lowered the water by that means "about 30 feet—at a . . . trifling expense." *Northwestern Gazette and Galena Advertiser*, November 3, 1838.

group coöperation which complicated the problem. Besides, it was found that a large proportion of the diggings which had been extraordinarily profitable down to fifty or seventy-five feet, actually yielded so much more grudgingly below those levels as to discourage the owners from expending money on them.[28]

Another revolutionary fact was the dominance of zinc sulphide over lead sulphide at about the level of ground water in most of the mines. There had been much of this on higher planes also, though it had usually been a subordinate mineral and, as we have seen, was thrown away as worthless. The first sales of zinc were made from this area in 1860 after which it gradually came to be mined but under more modern conditions because usually taken from near or below the water table.

It is proper, therefore, to close our account of pioneer lead mining at the year 1860, which in so many respects marks an era in the history of the region itself. Modern mining is zinc mining, and this is carried on under conditions which would have been inconceivable to the early lead miners.

To show how the zinc ore takes precedence of lead in production statistics, Chamberlin estimates that from 1860 to 1882 lead production in the whole district (Wisconsin, Illinois, and Iowa) totaled probably 320,000,000 pounds of ore while production of zinc aggregated 400,000,000 in the same period. During the last ten years of the period, zinc production more than doubled

[28] The drastic change in the tariff in 1846, which reduced the protection on lead from three cents per pound "specific" to 20 per cent "ad valorem," and permitted Spanish lead which at that time was being produced in unheard of quantities to compete for the American market, was also a discouraging feature, responsible in part for the exodus of lead miners to California in the years following and for the abandonment of mines above the water table.

lead production, and during several years prior to 1882, more than trebled it.[29]

The total indicated above, if distributed over twenty-two years, would average approximately 10,000,000 pounds of pure lead per year, which is a bagatelle when compared with the production record of the lead region for 1840, not to mention the years which followed up to and including 1847. And while the zinc production, if added to the lead totals, would do something toward equalizing the mining records of the two periods, it must be remembered that zinc was produced by only a few big capitalistic concerns, which affected seriously its community character. In fact, 70 per cent of the zinc was raised in the Mineral Point mining region. The lead miners of the earlier period used their lands after 1860 more and more for the agriculture to which they were so admirably adapted. The old shafts, like the shell holes along the western front, were filled up to give uninterrupted scope for the plow; the mining farmer and farming miner both turned out to be simply farmers.[30]

[29] *Geology of Wisconsin*, iv, 490.

[30] It was not unusual, in the 1880's, to see quantities of old, broken, and rusted pumping junk decaying in pastures or fields.

CHAPTER IX

LAND SELECTION

THE selection of lands in the lead counties differed widely from the simple process which we saw going on in 1835 and the years following among the settlers and speculators then thronging into the lake-shore counties.[1] Those persons relied upon all reasonably good lands being wanted soon for farming purposes, and all selections save mill sites, town sites, water frontage, etc., were made with the single object either of supplying themselves with farms, or of holding the land for sale at an advance to farmers who would arrive promptly.

In the lead region the first selection was motivated by the hope of finding mineral. At the time the lands were surveyed hundreds and even thousands of squatters were living scattered over these three counties in all the principal mineral districts. On this point the surveyors' notes bear unimpeachable testimony. As an example, Lucius Lyon, who later became a United States senator from Michigan, and as such was the adviser of Daniel Webster on land matters, when he surveyed township 1, range 2 east early in 1833, noted three different settlements, Shullsburg, Gratiot's Grove, and White Oak Springs, each of which at that time had five or six families. But he adds: "the two former, in

[1] Joseph Schafer, *Four Wisconsin Counties, Prairie and Forest* (Madison, 1927), chaps. iv and vi.

the most prosperous days of the mining business, have heretofore at one time contained not less than forty families each." The same surveyor notes the discovery, by himself and aides, in fractional township 2, range 3 west, of signs which led to the opening of several large and valuable leads. These attracted great numbers of miners from all parts of the lead region, making this district famous under the suggestive name of Potosi. The surveyors also located upon their plats farmhouses as well as mines, mills, smelters, and other evidences of effective occupation of the land for productive purposes. While they doubtless missed a good many, a detailed study of the notebooks and plats of the land surveyors would enable the historian to map the lead region settlements with substantial accuracy.

Only in rare instances, however, would these settlements be agricultural, for the survey was executed in the years 1832 and 1833 when farms were as yet exceptional, and miners' cabins the rule, though some farmers mined for lead in the winter season. Naturally, considerations of the land's utility for agriculture influenced men only secondarily when selecting mining prospects. Such tracts might lie in the prairie or in the forest, on gentle slope or beetling hillside: if the signs were right they tempted to digging and drifting for lead ore. Of course, every miner needed material to "timber" his mines, and if he did his own smelting or took in ore for custom smelting, he required in addition an indefinite quantity of wood for fuel. The government, when it began to manage the lead-bearing land (1821), leased timbered lands along with those producing mineral, therein simply regulating a custom of uniting the two kinds of land which would inevitably have developed in any case.

As related in earlier chapters, the government's policy of retaining title to all lead-bearing lands and leasing them for a tithe of the lead product,[2] was responsible for instructions to the register of the land office about reserving from sale all mineral lands in the Wisconsin land district. The reservations included (a) all lands which the surveyors' plats indicated as lead-bearing, (b) such other lands as the superintendent of the lead mines (an officer of the Ordnance Department) should select for reservation on account of mineral or timber values, (c) all tracts to prove whose mineral character testimony of individuals should have been given to the register of the land office. Supplementary lists could be filed at any time by the lead superintendent and all of these, as well as the original designations, were to be respected when lands were offered for sale unless they had been previously withdrawn.

Under the above principles many thousands of acres were intended by the government to be sequestered. On the basis of the surveyors' plats alone, 14,590 acres were reserved;[3] but the total, as listed in the Mineral Point land office amounted to 67,000 acres at least, possibly 102,000 acres, and one report had it 250,000 acres.[4] A large proportion of these had been reserved solely for the timber they contained which, in a multitude of cases, had been early removed, leaving the lands less valuable than average public lands. Moses M. Strong and his partners in speculation, when in 1836 they tried to force the land office to sell to them all the valuable

[2] Later the rental was reduced to 6 per cent.

[3] Certified list furnished Moses M. Strong by Robert Lytle, surveyor general, at Cincinnati, November 20, 1837. Moses M. Strong Papers, Wisconsin Historical Library.

[4] Moses M. Strong to James D. Doty, from Cincinnati, November 20, 1837. Moses M. Strong Papers, Wisconsin Historical Library.

mineral lands, made an inspection of the reservations selecting as exceptionally valuable 72,000 acres of which only a few tracts were included on account of their timber, the balance being, as they supposed, bona fide mineral lands. In fact, save for the few well-timbered tracts, they claimed to have personal knowledge that lead ore had been discovered on all of them.

The Ordnance Department reported in 1844 that a total of 64,077 acres of mineral land had been reserved in Wisconsin, which was held to be but a fraction of all the land shown by Owen's report to be underlaid with lead mineral. Another report, based on the records at the General Land Office at Washington, summarized the reserves at 160 sections or 102,400 acres.[5] Inasmuch as Moses M. Strong, in a business letter to Doty reports them to embrace an aggregate of 250,000 acres, of which he had selected 72,000 as valuable mining lands,[6] it is apparent that no one knew precisely how much land the government claimed as reserved. Either Strong in his statement, which was designed to induce Doty to finance the proposed purchase of all valuable mineral lands, intentionally exaggerated the total in order to emphasize his care in selecting the most valuable of the lands, or the land office at Mineral Point had given him false pretended information.

It was stated by the Ordnance Department that very few groves of timber had been reserved by the lead superintendent, which timbered lands were generally leased to near-by smelters. As soon, however, as the occupants felt disposed to enter such lands, they would

[5] 28 Cong., 1 Sess., *House Documents*, no. 43 (serial no. 441), War Department, p. 30. Lieutenant Colonel G. Talcott, referring to Charles Borland's report.

[6] Letter to Doty, November 20, 1837. Moses M. Strong Papers, Wisconsin Historical Library.

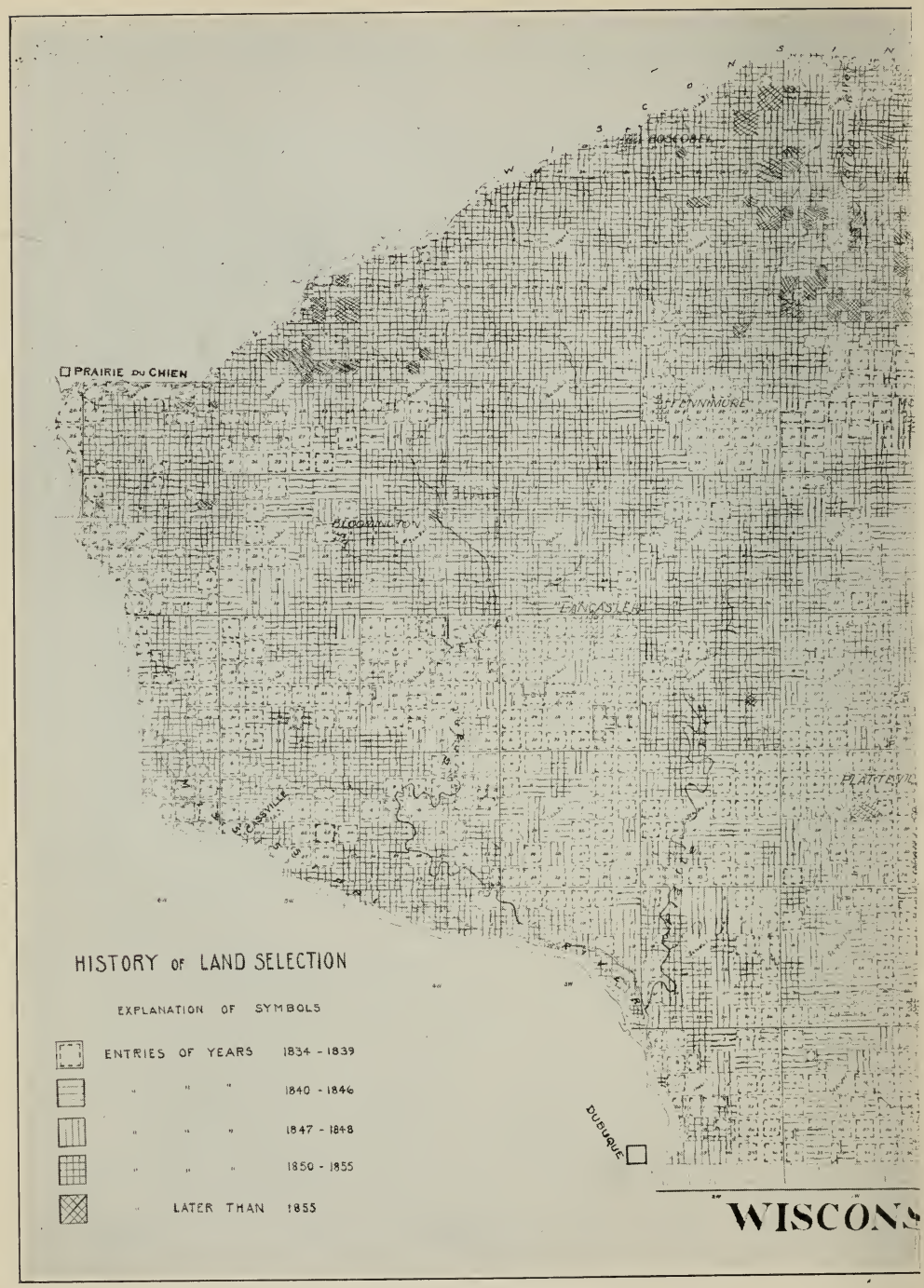
assemble a sufficient amount of floating rights"[7] from preëmptors to cover them, transact their business at the land office, and relinquish the lease to the superintendent of the lead mines. He, in turn, would then notify the land office that, the lease being relinquished, he no longer regarded the reservation as necessary. Thus the fraudulent entry, after the fact, was made to seem regular. This custom of withdrawing reservations which had once been made, complicated the records and may explain the discrepancies noted above.

In 1842, John P. Sheldon, the offending register of the Mineral Point land office, having been removed and the office itself shifted, a list was secured from Levi Sterling, receiver at Muscoda, professing to show precisely what reserved lands had been sold by Sheldon since the opening of the land office, October, 1834. The total of such "fraudulent" entries was 44,117 acres, and it was charged that the purchasers in many cases were speculators who bought mines from under the men who had discovered and worked them until they had become very valuable. Mr. Sheldon contended, with fierce invective against his accusers, that he sold no lands except upon sworn testimony that they contained no mines.

The question of whether or not the "fraudulent" entries covered actual diggings can be determined in some cases by comparing the descriptions of the entries with those of surveyors, of Owen's *Mineral Land Report*, and the lead mine chart of the State Geological Survey.

In township 2 north of range 2 east, 40 acres were purchased in 1835, 1,000 in 1836, and 280 in 1837. This

[7] For a definition of "floats" see Schafer, *Four Wisconsin Counties*, 59-60.


PRAIRIE DU CHIEN
BOSCOBEL
BENNIMORE
BLOOMINGTON
LANCASTER
PLATTEVIL
DUBUQUE
HISTORY OF LAND SELECTION
EXPLANATION OF SYMBOLS
ENTRIES OF YEARS 1834 - 1839
" " " 1840 - 1846
" " " 1847 - 1848
" " " 1850 - 1855
" LATER THAN 1855
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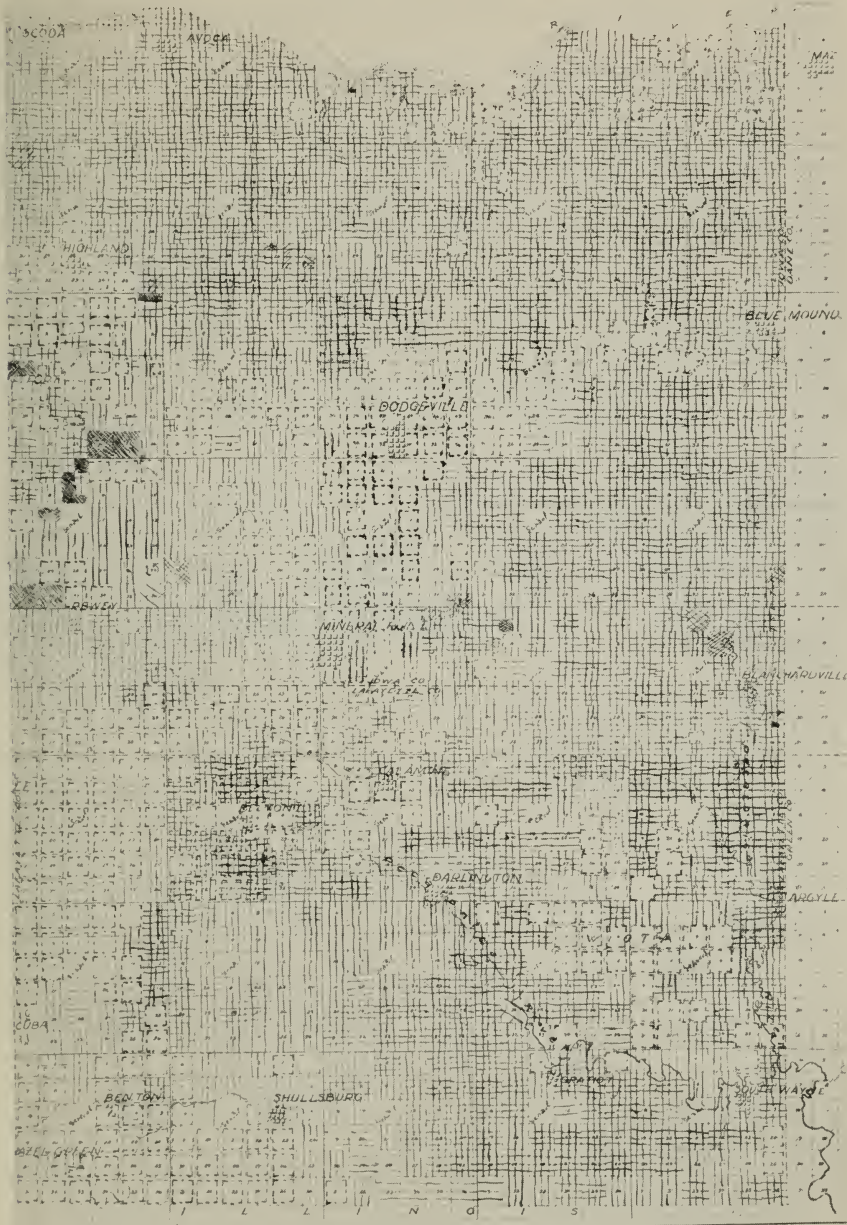

IN'S LEAD REGION
AND ITS ENVIRONS

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township had "scarcely any diggings" said the surveyor, and "little or no timber—except on the west side." The geologist, David Dale Owen, after traversing it in 1839, with special reference to its mining possibilities, says of it: "All prairie except about three sections of timber on 30, 31, 32, and part of 33, of young white oak. . . ." The Stump Grove Diggings "extend into 36. No important discoveries extend into this township." The later geological report shows a mine also in section 31, which had probably been discovered since Owen's inspection.

Now the published schedule of reserved mineral and timber lands sold contrary to order, shows that 462 acres of reserved lands, all lying in sections 29, 30, and 31 of this township, were entered in the years 1836 and 1837; that is, just over one-third of all that was entered in the township.

Since there were no mines on these sections at that time, and only one lode of any significance was ever found on any of them; and since the detailed notes of survey show there was timber on each of them, which would have a special value because of the Shullsburg diggings in the sections adjoining this township on the south, we are safe in asserting that these lands were taken for the timber they contained rather than for mineral prospects, which were left undisturbed.

An admirable contrast to the above is the history of entries in township 4, range 2 east, which was all wooded more or less, except two sections (30 and 31) of prairie. Owen's report says of it, as a whole: "About one fourth broken prairie in the middle and southwest; the rest is principally a thin and stunted growth of timber; there are two good groves of timber, one on 10 and 11, and the other on 20, 28, and 29. . . . On the southeast of

16 are some diggings but they appeared to be abandoned." Supplementing this general description, the surveyor's notes show the line between 1 and 12 "thickly timbered" with oak, aspen, etc.; and several others "pretty well timbered" or "tolerably timbered." These phrases apply to lines between 11 and 14, 10 and 11, 2 and 11; while between 28 and 33 is "an oak thicket," 20 and 29 is "well timbered in valleys."

Now, the schedule of "fraudulent" entries of reserved lands—in this case, lands reserved by order of the lead superintendent, not on the showing of surveyor's plats—includes 14 tracts in this township as follows: Section 1 entire; one-fourth of section 2; 240 acres in section 4; 80 in section 11; and three-fourths of section 12, an aggregate of 1,600 acres, all timbered land. The township adjoined the Mineral Point Diggings and it is not surprising that some of the entrymen were prominent Mineral Point operators in lead, who needed the timber. The land office book of entries will prove that all the respectably timbered land in this township, as well the reserved as the unreserved, was purchased during the first three years of the land office's activity. As showing that the earliest entrymen were either buying to obtain a supply of timber or to sell at an advance, in only three cases did the lands stand on the record in their family names as late as 1874. In the case, however, of the much smaller number of delayed entries, taken presumably by intending farmers, 20 of their surnames persisted till 1874. It is clear that some of the local big-mining men, as well as speculators from the East, were buying in the hope of selling at a large advance, for Matthias C. Comstock, noted miner and smelter of Grant County, in 1836 secured in the south half of the township an aggregate of 2,700 acres or just

under one-third of that fraction. He bought several contiguous sections entire, while some speculators were inclined to pick an eighty here, another there, or even to specialize in selected forties.

When we compare with the above the history of land purchases in township 5, range 1 east, several points of interest emerge. In the first place, although the township was credited by Owen (1839) with having, on section 3, the "Peccatonica Diggings," where 2 men could raise 3,000 pounds a day; and where at a later time were mines on 8 of the 36 sections, no entries of reserved lands were recorded. The township was mostly rolling prairie with some stunted white oak trees in the south (says Owen), and "one good grove on the southeast of 26." The prairie soil was classed as "first rate," the timbered "2nd rate." Time has demonstrated that the prairie soils of that township are among the very best farming lands in the state. While purchases occurred each year save three (1842, 1843, and 1856) between 1835 and 1857, the majority of them took place in five of those twenty-two years as follows: 2,840 acres in 1836; 1,100 acres in 1839; 3,600 acres in 1847; 5,080 acres in 1848; and 1,120 acres in 1849. In no one of the other seventeen years did as much as 1,000 acres pass from the government into private hands, and in each of six of them the amount was only 40 acres. After 1851 and up to 1883 the total purchases were 2,640 acres, or less than in the single year 1836.

The distribution of the entries is significant. The year 1836 was the big year of land speculation and the lands were doubtless taken, in most cases, for speculative purposes. The entries that year were in non-mineral sections more often than in those containing mines, while those in 1839 were in seven mining sections

and one where no mines existed; but most of these mines must have been discovered later, if Owen's survey can be trusted. In 1847 the miners were permitted to purchase reserved mineral lands which doubtless explains the heavy transactions of that and the next year. By that time, too, farming was a growing interest which would explain the purchases in 1849, and doubtless, in part, those of the preceding two years. But, unlike the timbered township 4, 2 east, bought for the most part in 1835 to 1836, this subdivision passed into private hands mainly after 1847. And in this connection it is interesting to find that twenty of the land buyers of 1847-49 were personally still in possession of their then purchases in 1870. Their farms were usually prairie and timber, prairie adjacent to timber, or wooded, of course very lightly. In short, we have here a proof that intending settlers appreciated rich prairie lands.

The most striking contrast to the history of the preceding case, is the absence of any record of "fraudulent" entry of reserved lands. It may, however, be explained by the deficiency of tempting timbered areas in the township, no reservation of that class having been made and as we saw above, these were the standard object of the so-called "fraudulent" entries. Miners usually had their homes on their mineral reserves and counted on ultimately being permitted to buy those lands which, meantime, were held on a kind of preëmption theory and though no law existed to validate it, this gave some confidence. A "buckshot" claim could always be set up, and among miners it was usually respected. But the timber which lay at a distance from the home place was not protected in that manner: hence, they or others entered it as soon as possible, satisfying their consciences

with the argument that, containing no mineral, it had not been justly reserved.

Charges were made, indeed, that mineral land also was entered fraudulently, men being led over it blindfolded, who then were taken to the land office to swear that they had been over the land and had seen no evidence of mineral.[8] Several facts contradict the assumption that such barefaced frauds were other than exceptional. One is that the entrymen who secured the reserved lands included, as the Ordnance Bureau chief records, the leading and most influential men of the mining region. George Wallace Jones, soon to be chosen delegate to Congress, first from Michigan territory and then from Wisconsin territory, headed the list of "fraudulent" entries. Numerous tracts were bought by John H. Rountree, of Platteville; by John Falls O'Neill, Abner Nichols, John D. Ansley and others, of Mineral Point; by Thomas Jefferson Parish, James Morrison, William Stephen Hamilton, the Gratiots, James R. Vineyard, J. H. Gentry, John and Charles Bracken, all well known and highly respected men. Such persons might share the psychological attitude inducing men to render the government's land policy nugatory, but they would hardly descend to the employment of the tricks of common swindlers.

But there is more conclusive evidence in the government's record of the eventual confirmation of the "fraudulent" entries. While these numbered between 600 and 700, after elaborate investigations, the assembling of masses of testimony, and the withholding of patents for more than a decade, all were confirmed to

[8] 27 Cong., 3 Sess., *House Documents*, no. 153 (serial no. 422), War Department, p. 3. See Lieutenant Colonel G. Talcott.

the claimants save a very few (less than a score) in which overt fraud had been established.

The conduct of the lead miners in relation to the reserved lands was not unlike that of other groups of Americans. It reminds us of the frontiersmen who, from the days of King Philip to those of Chief Joseph and beyond, stolidly persisted in violating the Indian reservations until the government in sheer desperation bought the Indian title and sold the land to them; of the cattle barons who believed themselves justified in fencing the public domain for pasture since they were not permitted to buy it at a reasonable price; and the lumbermen whose technical fraud in acquiring timberlands through dummy entrymen was felt to be justified as the only means of accumulating a large enough tract to warrant investments in milling plants.

In other words, we have here the normal reaction of independent Americans against governmental arrangements which they consider unjust. If there had been no land office established for the lead region and no public land of any description sold, the government might have continued to collect rent lead, economically, through the smelters as before. But the moment sales began, complications arose. Some of the land sold as agricultural land proved rich in lead; many of the reserved mineral lands had already proven valueless for mining. Speculators pressed in to absorb the dwindling supplies of timber in order later to sell them at a high price to either miners or farmers. Under these circumstances the miners who paid rent on leased land were at a disadvantage against "farmers" who obtained land free of rent which the government had sold them at $1.25 per acre. And if miners and smelters were to safeguard their future, the timber adjunct to their business must

be secured without delay. They petitioned the government to permit them to buy the lands they held under lease, but their appeal fell upon deaf ears, Congress still being obsessed with the notion that the government held in its mineral lands vast potential wealth. There was high legal opinion which maintained that under the law creating the Wisconsin land district reservations like those the president proclaimed in 1834 and 1835 were illegal;[9] and there was equally good authority for holding the collection of rent unconstitutional. We must not, therefore, blame the miners too harshly for devising a way by which they could buy their reserved lands, and for making haste to do so.

Our comparisons thus far tend to show that it was timber rather than lead veins which aroused the greatest eagerness among speculating purchasers of reserved lands, and it was timber likewise that attracted the earlier agricultural purchasers. Since the article was strictly limited in the lead region proper, it possessed a monopoly value. All farmers, all miners, and all smelters would be dependent upon the owners of the small scattering groves, or the stunted bur oaks of the openings, and would be prepared to pay handsomely for needed supplies. The facts could be fully illustrated from the entries in numerous other townships. Much has been written first and last about the early emigrant's assumption that prairie soils were undesirable for farms. As a matter of fact, there was no serious prejudice against such land as land. On the contrary, the circumstance that it was ready for the plow without the labor of clearing was a high recommendation for it. Nevertheless, there were reasons why the early farming

[9] That was Webster's opinion. See Joseph Schafer, "A Yankee Land Speculator in Wisconsin," *Wis. Mag. of Hist.*, viii, 377-392.

pioneers did not wish to make farms out of prairie land exclusively. Such farms would be exposed to the severe cold winds of winter, no light matter in this upland region; they would commonly lie at a distance from running water, being on the elevated ridges between the streams; and they would be lacking in necessary timber for building, fencing, and fuel. But in situations where prairie land could be had for cultivation, along with adjacent woodland, meeting the other desiderata mentioned, the prairie was always regarded as highly desirable.

We illustrated this point in connection with one of the townships of Racine County.[10] There it appears that all the fringing prairie, adjacent to wooded tracts, was taken up at the earliest opportunity, even when the land itself was not of first quality. Indeed, low marshy prairie was highly prized for its value as natural meadow and pasture, while high, well-drained prairie was the favorite for cultivation. A farm composed part of timberland, part of low prairie, and part of high prairie represented the early settler's ideal. But the big, open, exposed prairie on which families would be obliged to live out of touch with sheltering groves, away from convenient springs or rivulets, had for some years a dubious attraction, though finally it was all taken by men who usually could afford to build with lumber, to buy a tract of distant firewood timber, and dig down into the bowels of the earth for the purpose of tapping a water supply.

The study of the lead region confirms the above results. For example, Blake's Prairie in ranges 4 and 5 west of the fourth principal meridan, Grant County, was taken up so far as the marginal sections were con-

[10] Joseph Schafer, *A History of Agriculture in Wisconsin* (*Wisconsin Domesday Book, General Studies I*, Madison, 1922), 33-37.

cerned by the year 1842. But the higher, bleaker, poorly watered areas were left for later comers, mainly emigrants of the early 1850's; and this is a typical case.

Some parts of the lead region proper, especially those townships lying farthest south, were stimulated by the promise of the Lake Michigan and Illinois Canal and especially by the Chicago and Galena Railroad. At intervals, beginning with 1836 and reviving periodically—as in 1849—the project for a railroad from Milwaukee, via Madison, and through the lead region to the Mississippi, created much excitement. In the course of its construction, however, the route of the Milwaukee and Mississippi Railroad was shifted to enable the company to benefit from the easy, natural grade along Wisconsin River, mostly on the south side, through Helena, Lone Rock, Muscoda, Boscobel, and Woodman, to Prairie du Chien.

The construction of the road from Helena to Woodman affected those portions of Iowa and Grant, two of our lead counties, which lie principally north of the Military Ridge, or Long Prairie, and slope toward the Wisconsin, outside the lead region proper. The lower course of the valleys of north-flowing rivers as a rule was lightly timbered, much of the land was practically ready for the plow, and yet supplies of timber for farming needs were accessible sometimes in the low, protected alluvial lands along the streams, sometimes in the deeper ravines, or on the ridges from which fires had been deflected by the conformation of the surface. Questions determining selections there became mainly quality of the soil, conformation—whether open, level land in a valley wide enough to be safe against gullying, or land crowded against the steep slopes of the bluffs—and water supply. The good soils, especially alluvial

and bench lands in the wider valleys, were taken first, then the narrower valleys, then the rough, uneven, inaccessible clayey ridges between the valleys. Poorer soils interspersed among the better, in favorable locations, were usually taken into adjacent first quality farms, which sometimes comprehended much land on hill slopes and ridges also.

A land-selecting agency supplementary to miners, speculators, and farmers, was the state itself, which had received from the national government special grants of land for a university and for internal improvements. The first of these, devoting to the uses of the future state seventy-two sections of land, was made under a law of June 12, 1838; the second, a Whig measure of Tyler's administration, was passed September 4, 1841. By petition of the new state and the consent of Congress this grant, the so-called "500,000 acres," was diverted from its original object and added to the school fund to be created by the sale of the sixteenth section in each township.

The university land selections were made partly during the territorial period, the earliest list being approved by the secretary of the treasury August 8, 1840, and a second one March 25, 1841. These, however, applied to other than the three lead counties. On April 4, 1845 a list was approved which included the selection of sections 34 and 35, town 6 north of range 1 east, sections 4 and 9 in town 8, 1 east, and 29 and 30 in town 9, 1 east, all in the western and northern parts of Iowa County. The first selection (in township 6, 1 east) was in the lead district of Highland and, while the sections taken—34 and 35—included no mines, they were first rate land, rolling, and thinly timbered with oak which made them desirable for the farming operations then just beginning

near the new mining village of Highland. The other selections in that range, townships 8 and 9, appear to have been relinquished later.

The next list was approved August 12, 1848. Those selections were in ranges 2 and 3 east, townships 2, 2 east, and 1, 3 east, in Lafayette County. The first named town yielded 5 entire sections, numbers 3, 10, 11, 15, and 26. The lands of this township, "nearly all high, dry, rolling, first rate prairie," were, as stated above, taken to a small extent in 1836 and 1837, but the majority were among the delayed entries. In 1847 the miners bought their reserved mineral lands which accounts at least in part for the purchase that year of 1,880 acres. Nearly half of this total lay in the non-mineral sections, showing that agricultural lands were now being sought after. Still, the state agents were able to find valuable farm lands in the northern part of the township as late as 1848. Township 1, 3 east, like the township above described, was also mainly prairie, with excellent soil. No reserved lands had been taken in that township, and no mines appeared in it at any time, save the Stopline Diggings on sections 28 and 29. The state selected good farm lands to the extent of 4,480 acres. Since farmers were flocking in, the government selling in each of the years 1848 and 1849, 1,800 acres, a prompt demand could be expected at the government's price of $1.25 per acre, especially when the state was prepared to sell its university lands on particularly easy terms.

The selections under the law of September 4, 1841, the 500,000 acres, were designed to be so located and of such a character as to sell readily in competition with government lands. In fact, the state having also fixed a minimum price of $1.25 per acre, and having pro-

vided for giving the purchaser a credit of thirty years at a reasonable interest rate, it was confidently expected that the state's land in any given township would be taken in preference to government land.[11] This hope was not disappointed. At all events cases can be adduced, in the lead county townships, where the 500,000-acre lands were picked off before the adjacent public lands were entered.

Of the total amount of 500,000-acre lands found by the state's agent in the three lead counties, Iowa furnished 7,326 acres, Lafayette 10,570 acres, and Grant 2,187 acres, figures which are far from being proportionate to the areas of the respective counties. In Lafayette the bulk of the selections fall in three townships of the southern tier, number 1 of ranges 3, 4, and 5. We have just seen that the state had selected, in the first named of these, 4,480 acres of university lands. It now added 960 acres of 500,000-acre lands, making its total holdings 5,440 acres, or about one-fourth of the township, in addition to section 16. The second town in the row, 1, 4 east, yielded 1,140 acres and the third, 1, 5 east, 1,270 acres. All of these were open or lightly timbered lands, and all lay in agricultural townships which were beginning to fill up with emigrants seeking good farm lands. There were no mines in the three townships save the Stopline Diggings already mentioned as being in 1, 3 east.

Other selections in this county were in township 2, range 2 east, with which we have been concerned in another connection, and where the state monopolized 5,440 acres under the 500,000-acre classification, in addition to 3,200 acres of university land and the sixteenth sec-

[11] This subject is fully discussed in the author's paper "Wisconsin's Farm Loan Law," Wis. Hist. Soc. *Proceedings*, 1920, 156-191.

tion of common-school land. This means that, for a short period in 1848 and 1849, the state owned well over one-third of all the lands in that farming township. The state also chose 2 half-sections in township 2, range 3 east, and 2 sections in township 1, range 4 east—again, open or lightly wooded farm lands.

The Grant County selections were limited to five townships, two of them on the long prairie at the northern margin of the lead region proper; and three on the north slope. The first were in townships 6, range 1 west and 6, range 2 west, embraced within the towns of Wingville and Fennimore. Half a section, in sections 18 and 19, was taken in the first; and half of each of sections 31 and 32 in the second—all high, rich, open farm lands. The lands selected in township 7, range 1 west lay partly in the widest portion of the valley of Fennimore River, above its junction with Blue River, and in part on the prairie-like, but not bare ridge between Blue River and Fennimore. All selections were excellent for agriculture, some of them purchased as early as 1853 by the most discriminating farmers who settled at that time in the town of Castle Rock. The selections in township 8, range 1 west were all in the valley of Blue River and embraced some of the best alluvial and bench lands in the township. Portions of several tracts, however, were sandy. In fractional township 8, range 3 west, town of Boscobel, several river-front areas were selected on the Wisconsin, and most of the later town site of Boscobel.

There remain to be considered the selections in Iowa County. These are embraced within the limits of seven distinct townships, all within the lead region proper, and all but two of them containing lead mines. Yet the selections, as would be expected, in not a single case

fell within sections where there were mines. All the land was chosen because it was regarded as good farm land, largely rolling prairie with some timber, which would soon be wanted by actual cultivators of the soil.

The entries of 1834 to 1836 were prevailingly speculative. The roll of purchasers of lands in these three counties, as we saw, includes numerous local lead operators, who had money to invest and, like others, believed that investments in public land at $1.25 would insure their fortunes. But, in addition to local magnates, there was a considerable list of outside speculators some of whom bought extensively. The buyers' lists, as given in the first book of entries of the Mineral Point land office could readily be footed up to show just how much and what lands each big speculator received title to. It would probably appear that the largest single purchaser was William Shaw Russell of Montgomery County, Illinois. But Matthew Newkirk of Philadelphia, and the Bronsons of New York City were heavy buyers, as was Garret Visscher Denniston of Albany, Hall and Alcott of Charleston, New Hampshire (whose agent was Moses M. Strong), the Biddles of Philadelphia, and still others. One of the most interesting of the outside buyers was the Scotch nobleman, Sir Charles Augustus Murray, whose activities will be described in a later chapter.

The most stupendous speculation project was that attempted by Moses M. Strong who tried to compel the General Land Office to sell him and his associates all of the reserved mineral lands or the portion of them which he had selected as most valuable, amounting to about 72,000 acres. The leading partner in his company was Henry Hubbard of Charleston, New Hampshire, a United States senator from that state. Hubbard con-

ferred with Daniel Webster who believed the law was on their side and was prepared to make an argument before the commissioner of the General Land Office. But the panic of 1837 deranged Hubbard's finances to such an extent that he was unable to handle the deal and—while Strong still persisted in the plan—one of the solicitors of the General Land Office prepared a brief in the case which effectually locked the door against the proposed absorption of the lead mines by a single speculative company. Instead, as we have already seen, the government after nearly a decade's delay sold them at the rate of $1.25 per acre to the claimants of the mines.[12]

As has been said, speculative entries were most numerous in 1836. The money famine of the next year brought them to a sharp halt and, while at a later period such purchases were resumed, these three counties never again experienced such a rage for monopolizing government lands. The later operators were more cautious, kept closer to the actual demand for lands on the part of incoming agricultural settlers, and so far as they bought state lands instead of government lands, gave themselves a long credit, thus materially reducing the risk. Barber, Eastman, and Paine, for example, bought a large part of the 500,000-acre lands located within these counties. These could be held thirty years before the principal had to be paid, and meantime they could transfer their contracts of purchase to settlers at about 100 per cent advance on the original price. The speculators' responsibility was limited to paying the taxes, and an annual interest at the rate of 7 per cent on the purchase price. Much "speculator land," being selected unwisely, remained a burden to the purchasers for many

[12] See the present writer's article entitled "A Yankee Land Speculator in Wisconsin," *Wis. Mag. of Hist.*, viii, 377-392.

years and ultimately had to be disposed of at a loss. There were many "land poor" men among the mining speculators also, among them Major John H. Rountree of Platteville, for example. The burden of paying taxes on lands bringing no incomes to their owners, in addition to the interest on the investments, proved crushing to the economically weaker holders of such lands. On the other hand, those who were able to hold over for the more prosperous times following the Civil War, sometimes saved themselves or even made gains.

CHAPTER X

AGRICULTURE IN THE THREE COUNTIES

THE agriculture of Grant, Iowa, and Lafayette counties may be viewed under three geographical aspects, the mining districts proper, the non-mineral land areas within the lead region, and the deeply eroded slopes beyond its boundaries. The three counties contain approximately forty-eight townships of land, and of these the equivalent of about 140 square miles of the surface or roughly 8 per cent is occupied either by actual diggings or by well defined mineral districts, considering timber supplies as adjuncts to mining lands.[1] That leaves 92 per cent free for agricultural utilization. There are certain townships and parts of townships which are so honey-combed with mines as to place farming at a physical disadvantage. Such are especially township 1, range 1 east, containing the towns of Benton and New Diggings, with the easternmost tier of sections in the adjacent township 1, range 1 west (Hazel Green); the eastern tier of sections in township 1, range 2 west (Jamestown); the northern half of township 1, range 2 east (Shullsburg); township 3, range 1 west (Platteville); the southeast quarter of township 3, range 3 west (Potosi); a half township in Beetown and Glen Haven; a half township in Mineral Point and Lin-

[1] The government, as we have seen, though it presumably reserved from sale all actual mineral lands, together with adjacent timber, had various estimates as to how much land the reserves embraced. The highest of these estimates was 160 square miles. The lowest being less than half that amount, our estimate of 140 square miles would seem to be liberal.

den; a half township in Dodgeville and Ridgeway. In the balance of the mineralized areas the mines are so scattering and occupy so relatively little of the ground as to constitute no particular hindrance to farming operations. As against the mineral districts we have, lying wholly within the lead region, the towns of Wayne, Gratiot, Monticello (except a single quarter-section), Fayette, Waterloo, Ellenboro, Moscow, Waldwick, Liberty, Lancaster (northern township), Little Grant, and Bloomington which are wholly free from under surface works; and at least fifteen other townships which have less than a thirty-sixth part of their surface affected by diggings. The northern slope, toward the Wisconsin, which lies beyond the bounds of the lead-bearing region, is of course wholly free from such works though it has more formidable hindrances to cultivation in bluff and gulch lands. These facts emphasize the agricultural character of the region whose earlier development was based exclusively on lead mining.

The original incentive to cultivate the soil was the high prices for foodstuffs which ruled in the mines and, up to the point where the mining demand was satisfied, agriculture in the several neighborhoods was soon in a flourishing condition. This is illustrated by the scattered "farms" shown on the Chandler map of 1829. The government's regulations in 1825 provided for mining claims of 300 square yards and one-fourth acre for farming purposes. The idea was to subordinate farming to mining on the reserved lands. But nothing could prevent squatters from cultivating tracts of government land so long as farm products brought high prices.[2]

[2] Moses Meeker in a summary of lead region history from 1822. *Galenian*, September 29, 1835.

There were times in the early period when food was scarce. Sir Charles Murray who visited the region at the end of the year 1835 and bought his lands in Grant County the next year, declares in his *Travels* that not one-twentieth of the required supplies for the mines were produced in the country itself. In the winter of 1838-39 there was a mild famine due to the ice embargo, and farmers having a surplus of wheat were urged to have it ground and brought to the mining centers, particularly Mineral Point. Abundant supplies could be secured from the older settlements by steamer during the summer months but if the Mississippi happened to be blockaded too early, or to remain closed late in the spring, the need of the local production was sharply emphasized.[3]

Early in 1839 Mortimer M. Jackson, a lawyer recently arrived from New York, published the prospectus of a proposed book (which was never issued) on the resources of Wisconsin. The *Free Press* editor, in commenting on the notice, stressed the immense advantages to the farmer of having in the mining population a domestic market for his products. Since mining required the application of capital, and lead commanded cash at the smelters, all miners as a rule were supplied with ready money with which to pay for their supplies—a special advantage to the producer.[4] These conditions were well understood and they strengthened the agricultural appeal of the mining region when it became clear that mining was a relatively permanent industry, and miners no longer a transient, shifting population who might spend a few months in the mines and then leave

[3] *Miner's Free Press* (Mineral Point), November 27, 1838. They suspect Galena merchants of cornering the food and holding for famine prices.

[4] *Ibid.*, April 30, 1839.

for parts unknown. Rev. Aratus Kent, for example, the pioneer Presbyterian missionary of the lead region, foretold as early as 1832 that a few years would bring a large immigration from the East to exploit these special opportunities. He advocated the sending to the Wisconsin mining area of a New England missionary who should enroll a colony from New Hampshire or Vermont, select a tract of land on Grant River or on the Wisconsin, ten or twenty miles from Prairie du Chien, and establish an orderly, religious, and moral farming community.[5]

The Grant River district proved so attractive to Murray three years later, on account of its combination of prairie, timber, excellent water, and generally excellent soil for agriculture together with easy access to the lead region markets, that he celebrated it as probably the choicest unoccupied farming area in the United States. He put his faith to the test in purchasing thousands of acres of government land in that very district and only a few tracts outside of it.[6]

General booster articles which described the lead region as "approximating to that of a country settled for centuries" shed little real light on its farming conditions,[7] and we have no means of statistically testing such statements prior to the census of 1840. At that time the number of persons engaged in agriculture, in Grant and Iowa counties, was 1,264 as against 1,512 miners, the total population of the region being 7,904. Seventy-six

[5] Letter of June 14, 1832. Photostats, Wisconsin Historical Library. The idea was repeated in various letters. He thought such a colony might accomplish as much in ten years, toward the moral improvement of society, as Jacksonville had achieved in Illinois. The same idea was advocated by Marcus Whitman for the Oregon region a few years later.

[6] Hon. Charles Augustus Murray, *Travels in North America* (London, 1841), especially ii, 133-136.

[7] *Miner's Free Press* (Mineral Point), October 9, 1838.

were assigned to commerce, 42 to the professions (nearly all lawyers and doctors), and 467 to "manufactures and trades" which doubtless here meant blacksmiths, carpenters, wheelwrights, millers, and the like. The amount and variety of live stock was considerable. Horses, which were used by both miners and farmers, aggregated 2,113, "neat cattle" numbered 8,764 but there is no separate count of work-oxen, sheep 1,046, swine 16,263. The poultry was valued at $5,487. Assuming that the cattle were in large part work-oxen and milch cows (dairy products were valued at $10,634), the meat resources consisted mainly of pork which, derived from the "prairie-racer" variety of hogs, was sufficiently lean to make good bacon, a standard miner's food over a wide range of climates. The number of swine, twice that of the population, was adequate to furnish a full meat supply, and the amount of corn produced, 177,000 bushels, should have sufficed to fit them for slaughtering and leave a balance for the "corn pone" which, with bacon, was such a favorite food of the Southwesterners.[8] There was just enough buckwheat grown, 1,200 bushels, to furnish a variation in that diet, at least for winter breakfasts.

In comparison with corn, the wheat crop was insignificant, less than 24,000 bushels being reported, but this was doubtless made into flour at the flouring and gristmills of which there were 5 in each of the two counties. The census "flouring mills," 2 in Grant, 1 in Iowa County, are credited with an aggregate of 900 barrels of flour, a small amount considering the quantity of wheat raised; but it is practically certain that the grist-

[8] Droves of hogs ranged the prairies at will during the summer and becoming partially fat on the mast (acorns) of the oak groves in fall, could be conditioned without too large an expenditure of corn.

mills supplied the farming community with wheat flour as well as corn meal. Besides, there was the rapidly developing district of northern Illinois to draw upon both for wheat and flour.

According to the seventh census (1850) the then three lead counties had a grand total of 1,622 farms containing 85,699 acres improved land and 172,150 acres unimproved, the whole valued at $1,785,887, or an average of nearly $7.00 per acre. These farms would show 53 acres of improved land and 106 unimproved, giving them an average area of 159 acres, with precisely one-third of the land under cultivation. Notwithstanding the serious loss of man power resulting from the gold craze, they produced in 1849 an average of 148 bushels of wheat, 232 bushels of corn, and just over 302 bushels of oats.

Contrasted with the two prairie counties of the southeast, Kenosha and Racine, the above showing lacks impressiveness. In the first place, these two counties, with only a fraction of the area of the lead region, had 1,874 farms or 252 more than the three southwestern counties; and they produced, from approximately 60 acres improved land, nearly 270 bushels of wheat. The other crops, corn and oats, were less in volume than the wheat, whereas in the lead region they were decidedly more. When we compare with Milwaukee County in the forested district of the lake shore, the story is different. There, on account of the slowness of the farm-making process, the improved acreage was much smaller than in the lead region and the product for that reason far less. In Milwaukee County, 1,184 farms produced 61,000 bushels of wheat or only 51 bushels per farm. These wooded counties raised some oats and a little rye but very little corn.

Agriculturally, therefore, the lead region in 1850 occupies a middle position between the rapidly developing southeastern prairie district where wheat growing for the eastern market—reached by the lakes and Erie Canal—was an intensive pursuit, and the eastern woods whose pioneers were patiently chopping and grubbing in the hope of making good farms with the passing years. It is clear, also, that the lead region approaches nearer the achievement of the prairie lake shore than of the forested area. In fact, Grant, Iowa, and Lafayette had as yet mainly prairie or prairie-edge farms. The rough, bluff and valley land, sloping steeply down toward the Wisconsin from the lead region proper, was not settled to any considerable extent and would not be settled until the expectation of the railway sent emigrants into their pleasant lower valleys.

Farming had advanced gradually and silently during the intervening years, until it had come to be recognized as the leading interest in each of the three lead-mining counties. The turning point was the sale of the mineral lands in 1847. This was an event in the southwestern part of the state analogous in its significance to the sale of farm lands at Milwaukee in 1839. "The fullest representation from the diggings that ever assembled in the mines" was present at Mineral Point to attend the sale.[9] A rhymster was required to tell how they came from all parts of the mining country, and the following is his effusion as printed in the issue of the *Herald* from which we have just quoted:

> New Diggings, Shake Rag, Benton, Snake,
> Are all on hand and wide awake;
> Black Jack, Black Leg, Swindler's Ridge,
> Claim with the rest their privilege.

[9] *Wisconsin Herald* (Lancaster), June 5, 1847.

Franklin is there and Centreville
Crawls from its elevated hill.
Dodgeville, Shullsburg, Hamilton,
Are there to see to number one.
Burlesqueburgh, Platteville, White Oak, Whig,
Scrabble, The Little Patch and Big,
Red Dog, Pin Hook, Nip and Tuck,
Are all on hand to try their luck.
Beetown and Pigeon hither fly,
With cash in hand their lots to buy;
And last, and least inclined to nab,
Her share of mineral lands, is Grab.

The purchase of the reserved lands by the claimant settlers and miners imparted to the society of the mining country the character of permanence it had formerly lacked. Many of these lands were farmed as well as mined, and the new impulse to community development brought with it a demand for agricultural lands outside of the reserves. The sales at the Mineral Point land office of 74,000 acres in 1846, 117,500 acres in 1847, and 53,500 in 1848 tell the story of a large influx of agricultural immigrants in those years, most of whom were seeking lands in neighborhoods already well-established through the history of lead mining.

The census of 1850 is not strictly available as a source for accurate agricultural statistics, of a detailed nature, because to a large extent the farms of different townships are jumbled together in "districts." That makes it impossible to determine with exactness what lands in the three counties were most advanced and what ones least advanced from an agricultural point of view. Still, some conclusions can be ventured. One is that farming gained its early impetus from the mines, the local market for foodstuffs being the stimulus to raising crops on the circumjacent non-mineral lands. In many cases the subdivisions containing mines were all

under cultivation except the actual ground perforated by shafts together with a comfortable area about them.

A good illustration is the town of Platteville, occupying township 3, range 1 west, in Grant County. The farms of that and the other towns of the "eastern district" of the county are segregated in the census while those of the "western district" of Grant, and of the several towns of Iowa and Lafayette, are not. Under Platteville were listed 77 farms which contained 5,482 acres of improved land and 6,257 acres of unimproved. The aggregate constitutes fully one-half of the area of the township. The average farm had 71 acres of arable, several showing as much as 240 acres. Production also averaged high, wheat running 256 bushels per farm and corn 265. One farm harvested the respectable crop of 1,000 bushels of wheat, several others ranging between 700 and 800 bushels, while one farmer who produced 800 bushels of wheat harvested in 1849 a corn crop amounting to 1,500 bushels and an oats crop of 2,000 bushels. The average valuation of farm land was $14 per acre, though one farm was rated at $22 and another at $25 per acre. These were moderate sized holdings and nearly all their lands were improved. No very large areas were embraced in any of the Platteville farms; the largest contained 520 acres and 28 of the 77 had 80 acres or less.

These facts reduce the aggregate valuation of Platteville's farm lands below that of some other groups, but it is believed that none would average higher and certainly none show an agricultural development which surpasses that of Platteville. Hazel Green, for example, another mining town, shows an average valuation of only $10.50 per acre, while in the northern margin of the lead region where, as in the case of Fenni-

more and Wingville, the farms were relatively new, lower averages prevailed. In the first named it was only $6.75 per acre. It goes without saying that much the greater portion of the land included in the farms was as yet unimproved.

The town of Ridgeway, in Iowa County, equal in area to three government townships, formed a census district by itself and can therefore be statistically interpreted. The town lies on the prairie ridge, but being 11 miles long from north to south, it includes some valley lands in both the Pecatonica system and on Mill and Blue Mound creeks. In effect, the town is made up of a narrow prairie flanked by rough timbered lands at the north and by gently rolling wooded lands on the south. The farms, 86 in number, were scattered over its 110 sections, of course rather thinly. There was mining activity about Blue Mounds, and a few other points, but not enough to interfere with the agricultural utilization of the land. But the farms were comparatively undeveloped, only 2 having as much as 100 acres improved, 71 of the entire number having 40 acres or less of arable, and in the town as a whole the unimproved land amounted to more than twice the improved. The productions, in consequence, averaged low, 102 bushels of wheat and 135 of corn to the farm: while the valuation averaged $4.50 per acre. Nevertheless a 200-acre farm, one-half arable, was valued at $2,500, or $12.50 per acre, and another with 100 acres arable and 150 wild, was valued at $5,000 which would be at the rate of $20 per acre. Evidently combinations of open prairie and of woods, in suitable proportions, were appreciated here as elsewhere.

The eighth census (1860) supplies a more satisfactory test of agricultural progress, it being possible with

its aid to compare the records of the three counties and of the towns within the counties. Lafayette had sixteen towns which varied in number of farms from 45 to 161 and in average amount of improved land per farm from 38 acres in Argyle to 112 in Belmont, and in gross area of farms from 114 in Shullsburg to 176.5 in Belmont. The two towns of Belmont and Gratiot were practically tied for first place in production of wheat and corn, Belmont producing 3½ bushels more wheat per farm, Gratiot, 19 bushels more corn. Were oats considered also it would put Belmont, with an average of 687 bushels, far ahead of Gratiot which produced 430 bushels per farm. In live stock also, Belmont was far in the lead.

Yet, despite the advantages of larger farms and a larger percentage of improvements, larger grain crops and decidedly more horses and cattle in Belmont, the average valuation per acre of land in that town was precisely the same as in Gratiot, $14.50. The difference did not lie in the soil, nor in the conformation of the land, both towns being chiefly high, rolling prairie with some timber, each having one good grove. But Gratiot had the Chicago and Galena Railway just below her south line, and a connection therewith through the Mineral Point Railway, giving a transportation advantage which offsets those mentioned in favor of Belmont. In fact, this is the key to variations in averaging valuations among the towns of the county. Those on the south line, served conveniently by the one railway of that time and its feeder, were high in the rating of their lands, those more remote from the railway, low. New Diggings led, with an average of $21.20 per acre, Monticello followed with $20.35, and White Oak Springs stood third, $19 per acre. Shullsburg, though off the main line, lay stretched

through 9 miles at a distance of only 3 miles north of the boundary, and had the Mineral Point branch line at her door. Her valuation averaged $16 per acre. Gratiot and Wayne, the other two towns on the south line were less distinguished, but the soil of the latter was light, a disadvantage not fully compensated by the agreeable alternation of prairie, openings, and groves. The same must be said of the town of Argyle (township 3, range 5 east), which showed the lowest valuation of the sixteen towns, only $7.70 per acre, and also the most limited improvements, averaging 38 acres to the farm of 150 acres. The lands of this town had been taken up, very largely by Norwegian immigrants, in the decade 1844 to 1854, as had also those of Wiota and those of Blanchard.

Iowa County's eleven towns show surprising variations both in valuation of farm lands and in production. The census assigns the lowest valuation figures to Waldwick, lying east of Mineral Point, occupying township 5, range 4 east. The land was rolling to rough, in part prairie, but mainly oak openings, and there never were mines in the township. The soil was not first class throughout though much of it was good. Farm areas averaged 171 acres, with 45 acres improved, which gave the town fourth place in that particular, above Dodgeville and Ridgeway, on the Military Ridge, and Arena, Wyoming, Clyde, and Pulaski, fronting on the Wisconsin. The town's great handicap was not merely in its soil but also and chiefly in market facilities. With no mines and no villages it lacked a local market such as Mineral Point's farmers had; and it lay nearly 30 miles from the 2 main railways, the Chicago and Galena, and Milwaukee and Mississippi, though near the Mineral Point branch line. On the other hand, the town of

Pulaski which heads the list in valuation, has the Milwaukee and Mississippi Railway traversing its longest axis, and none of its farms were more than 4 or 5 miles from the shipping point, Avoca. While the soil of the Wisconsin valley throughout this region is generally a light and infertile Plainfield sand, Pulaski included several considerable areas where outwash from the limestone bluffs had so modified the basic soil as to produce a rich sandy loam, peculiarly favorable for growing corn. This explains why that town had the record for corn production, without being lowest in wheat.

Distance from an adequate market depressed such fertile districts as Dodgeville and Ridgeway below sandy Arena. Even the most favored locality on the prairie was unable to overcome the handicap of location. The census schedule lists 40 farms to the sheet and so far as Iowa County is concerned one of the sheets pertaining to the town of Mifflin is more impressive than any other. That group of farms averaged 202 acres, with 119½ improved, from which were produced 597 bushels of wheat and 394 of corn. Among the 40 farms were none valued at less than $800 which figure describes seven, one rated $1,000, two $1,200, three $1,600, four $2,000, two $2,400, six $3,000, six $4,000, one each $4,500, $4,600, $4,800, and $5,000, two $6,000, one $6,500, and one $8,000. A single farm comprising 800 acres of which 700 was reported improved (though it showed little in the way of production) was valued at $12,000. All names but one of these 40 farmers were either American, English, or Irish. Ten were natives of Pennsylvania, 6 of New York, 4 of Maine, and 3 of Ohio. Kentucky, Virginia, New Jersey, Massachusetts, and Indiana each supplied 1, making a total of 28 Americans. Nine were from England, and 2 from Ire-

land. Gilbert Bareis, the lone non-English-speaking farmer—and ultimately one of the wealthiest in the town—gave his native place as Württemberg, Germany.[10]

It is an interesting fact that the farms described in this schedule, all lying in sections 5, 6, 7, 8, 9, 18, 19, 20, 29, and 30, of township 5, range 1 east, included very little except first-class prairie lands. The farms were bought from the government or from private owners, in the years 1848 to 1859, and the purchasers appear to have deliberately avoided the timbered tracts near the heads of the streams, doubtless because those were deeply eroded and rough, while they were looking for land which could be readily transformed into productive fields. There was wood at convenient distances in all cases, and usually a little on each farm. The soil was nearly all of the characteristic black prairie type, Marshall silt loam. The distinction of this group of farms proves that the prairie was coming into its own as a choice farming district. And it is a testimony to the holding power of lands like these that forty years later the 40 farmers of 1860 were represented by at least half that number of their descendants, occupying the identical lands. One of these, the sole German of the group, who had 140 acres in 1860, had left to his suc-

[10] Here are the names of this noteworthy group of farmers, arranged under their birthplaces, as follows: Indiana, Silas Leythner; Kentucky, J. H. Moon; Maine, Lorenzo Stevens, Caleb Sylvester, Abel W. Sylvester, John B. Sylvester; Massachusetts, Henry Rewey; New Jersey, A. Wells; New York, C. J. Rose, John Ellsworth, Charles S. Millard, Stephen M. Murdock, Daniel Hall, Hiram Bickford; Ohio, Robert Culbertson, Henry Ludlow, James Adcock; Pennsylvania, James Gallagher, Isaac Davis, Thomas Lincoln, Thomas Flint, Putnam David, William Kay, Oliver David, Adam Keith, B. Inman, Dickerson Lincoln; Virginia, Thomas Taylor; England, Johnson T. Rundell, Matthew Biddick Sr., Matthew Biddick Jr., Samuel Rundell, Richard Biddick, William Schaife, Benjamin Gibbon; Cornwall, England, Charles Williams, Robert Collicott; Ireland, Hugh Livingston, John Farreis; Württemberg, Gilbert Bareis.

A PRAIRIE FARM, TOWN OF MIFFLIN, IOWA COUNTY, 1886

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cessors in 1901 a clean 800 acres of the choicest land in the township, worth at that time probably $200 per acre. Many of these farms still bear the same family names.

Grant is the imperial county in the combination of three. It contained in 1860 twenty-nine organized towns and a grand total of 2,286 farms as against 1,863 in Iowa County and 1,534 in Lafayette. There is, however, a geographical fact which differentiates Grant County from the others in the character of its farm lands, namely, its long river frontage on both the Mississippi and the Wisconsin, while Iowa fronts only on the latter and Lafayette escapes the river slope bluffs entirely. Grant has much more rough land than the others and proportionally a smaller area of prairie. As in the other counties, the prairie towns were already leading in production, and considering their relative situations as respects transportation, in valuation also. From the latter viewpoint Platteville (the high town in 1860) and Hazel Green tied for first place. The latter was nearer the Galena and Mississippi market base, but Platteville was directly on a branch of the Chicago and Galena Railway, which removed the handicap in that respect. Hazel Green produced a much larger corn crop; in wheat they were nearly even. But Platteville showed about $100 per farm more of live stock than her neighbor on the Illinois line.

The two towns were equally devoted to lead mining, and their rural populations compared in origins as follows: among Hazel Green's 160 farmers were 80 natives of England, 21 of Ireland, 22 of Hanover, 21 other Germans including 2 Swiss, and 16 American-born of whom one-half were New Yorkers, 3 "Buckeyes," and 1 each from Connecticut, Maine, Vermont, Pennsylvania, and Wisconsin. The wealthiest farmer was John Ed-

wards, native of England, whose rating was $34,100 real estate, and $12,350 of personalty. Platteville's 117 farmers included 38 natives of England and 14 of Ireland; also 36 Germans of whom 26 were from Prussia and 10 from Hanover. The balance were American-born, 7 New Yorkers, 5 Ohioans, 3 Pennsylvanians, 2 from each of five states—Vermont, New Hampshire, Indiana, Illinois, and Wisconsin, and 1 each from Connecticut, Kentucky, Tennessee, and Michigan. Aside from John H. Rountree who, though listed as a farmer was much more miner, smelter, and general business man, the wealthiest farmers were among the English. John Huntington rated $21,000 real property and $2,500 personalty, George R. Laughton $57,200 and $14,287 respectively.

The low town, in valuation and also in amount of improved land, was Waterloo which lay mainly in the Mississippi bluffs below Cassville. It enjoyed the advantage of river transportation, but was not in direct touch with a railway. Its arable amounted to only 32½ acres per farm, on which the wheat production was 87½ bushels, the corn 155. There were no compensating productions in the way of live stock and we are forced to conclude that this was a backward town on account of the fundamentally difficult soil and surface features. It is interesting to note how it was peopled at that time, so far as the farms were concerned. In the first place, a considerable number of persons must have been tenants, for we do not find in the population census the requisite number of farm owners. Of the 64 who were identified, 14 were natives of New York, 3 of Ohio, 3 of New Hampshire, 3 of Virginia, and 3 of Kentucky. There were also 2 each from Massachusetts, Pennsylvania, New Jersey, and Missouri, 1 from North Caro-

lina, 2 from England, 4 from Canada, and 4 from Ireland. Of non-English-speaking foreigners there were 6 Prussians, 4 Württembergers, 3 Bavarians, and 2 French, with 1 each from Switzerland, Hamburg, Luxemburg, and Baden. This represents a heterogeneous population as compared with Platteville and Hazel Green, but that is not abnormal in the case of a river town of Waterloo's varied geographical character. It arose from the mixed travel up and down the river, the neighborhood to productive mines, the woods work connected with the fueling of steamboats and smelters, a favorable mill seat encouraging pioneer manufacture and trade. Also, of course, the diversity of lands, largely rough but both heavily and lightly wooded, which attracted diverse types of settlers.

CHAPTER XI

TYPE LANDHOLDERS

ALL sorts and conditions of men are to be found among the purchasers of land in these three counties, but to show the radical difference in community result between ownership by a speculator and by a genuine farmer two concrete cases may be presented.

The foregoing chapters will have familiarized the reader with the facts of speculation as it manifested itself in connection with lands in several of the towns of the mineral area. We saw mining men of the region, as well as outsiders, absorbing government land in the hope of growing rich out of unearned increments, and called special attention to the kinds of land which seemed to be the favorite subject of speculation, namely, the wooded tracts scattered through the mining towns particularly in Lafayette and Iowa counties. Grant County also had its outstanding figures in the speculative field and one of these is so interesting as a character, and also as a land operator on the grand scale, as to merit special treatment. This man, scion of a noble Scottish house, was Sir Charles Augustus Murray.

Grandson of that Earl of Dunmore who gained notoriety as royal governor of Virginia at the outbreak of the Revolution, young Murray (born in 1806) was commissioned by his family to go to America and look into the status of the Dunmore lands in Virginia. He reached New York about July, 1834, and spent several

months traveling in the north—New York, Canada, and New England—before undertaking the special work for which he came. This finished, he spent the winter in Washington and New York and in spring arranged for an extended tour of the West, hoping to reach the frontier in time to accompany Colonel Henry Dodge and his rangers on their prospective tour from Fort Leavenworth through the Indian country; for Murray was an eager student of Indian lore and language. But he contracted the cholera in Cincinnati and this, with other impediments, made him late at Leavenworth.

Fortunately, however, as he thought, a large party of Pawnees led by several chiefs well known to the officers at the Fort, appeared there soon after Murray's arrival. Arrangements were now made for him to proceed with the band on their movement through the buffalo country to the summer encampment of the tribe. Accompanied by a young German traveler and attended by two servants, Murray entered upon that arduous and dangerous scientific pilgrimage from which his coolness and intrepidity rescued his suffering party some ten weeks later.[1]

After his return to St. Louis, Murray ascended the Mississippi in the steamboat *Heroine*, stopping at Keokuk, Fort Des Moines, Fort Armstrong, and Galena. From Galena he visited Fort Crawford and spent several days with some of the young officers on a hunting expedition in the Turkey River country. This failed on account of the jealousy of the Winnebago Indians, who got in ahead of the party, driving the game before them and setting the woods and prairies on fire to embarrass the white Nimrods. On one occasion, when

[1] The full story, with all of its thrills, can be read in Murray's *Travels in North America.*

Murray was crossing a few miles of open grassland, a fire suddenly roared and crackled behind him threatening instant destruction; he was quick-witted enough to save his life by hurriedly burning a space around him and letting the holocaust pass by.

From Prairie du Chien he prepared for an overland trip back to Galena, crossing Grant County to a point opposite Dubuque. On the way he spent several days in the Grant River district which proved singularly attractive on account of its combination of fertile prairie, rich bottom land and splendid timber, so that when he was ready to enter lands in Wisconsin he directed his agent to buy as much of it as possible in townships 4, range 4, and 4, range 5 west, the present towns of Beetown and Glen Haven, Grant County. But his purchases were not made immediately. Murray in the winter of 1835-36 visited New Orleans and Cuba, then went once more to Washington and New York.

At this point it is necessary to notice a romantic motive which possibly influenced him in carrying out the land deal referred to. While visiting at Geneseo, New York, in 1834, in the family of the wealthy pioneer of the Genesee valley, James Wadsworth, Murray fell in love with Elsie Wadsworth, the host's daughter, who seemed to return his affection. In the early summer of 1836 he visited her again and tried to prevail on the father to let her go with him to England but with no success. He would have been willing to become an American citizen, but his aristocratic family opposed his plan and he was compelled to sail for Europe.

Now, on the two successive office days, August 6 and 8 (Saturday and Monday), 1836, an agent at Mineral Point entered in his name 20,000 acres of land paying $1.25 per acre, or $25,000, giving the purchaser's

address as "New York County, N. Y." All of the land lay in Grant County except a single half-section which was in Lafayette.

As already stated, the bulk of it, over 11,000 acres, was in the two contiguous townships—4-4 and 4-5 west, and the manner in which that portion was located almost suggests that the agent may have been instructed to buy land suitable to form a great baronial estate in Wisconsin. For, whereas the average speculator distributed his purchases widely, buying a hundred and sixty acres in one section, an eighty in another, and a forty in a third, looking to the values which surrounding improvements would confer upon them, Murray's lands lay so massed that it would have been possible in the two townships noted to run a continuous fence around 10,200 acres without thereby capturing more than 200 acres of other men's lands. This would still leave him, in the two townships, 5 other tracts, ranging in size from 160 acres to 560 acres, which would form convenient outliers of the great demesne. The balance of his Grant County lands was in larger and smaller parcels, scattered through five other townships.

The Murray lands were not used to build an estate, baronial or other, but were sold in their unimproved state, and the history of the transactions probably illustrates quite accurately the history of large scale land speculations in the region generally. Fortunately the records in the office of the register of deeds at Lancaster enable us to follow the business step by step, from the date of the first sale in July, 1846, to the final clean-up at the close of the year 1879. In only a single case, of a small sale, do we fail to find the purchase price stated in the deed, and other contemporaneous sales enable us to estimate this one closely. The net result is that we

know what Murray's gross receipts for his 20,000 acres were, and having also a complete record of the dates of the sales, it becomes possible to compute the returns compounded at an agreed on rate, say 5 per cent.

The delay in beginning his sales indicates that Murray found no promising market for his lands until the government decided to sell the reserved lead lands, and settlers in large numbers began to seek homes in that region. Still, for some years, his agents were obliged to sell at only a small advance over the government price of raw land. In fact, as late as the year 1851, fifteen years after his purchase of the property from the government, they sold 2,480 acres or one-eighth of the whole, for $5,766, an average price of $2.32 per acre, which makes one wonder how he met his tax bills, to say nothing of a profit on the investment. Of course, this was an era of depression in the lead counties because of the California craze.

Thereafter the price gradually rose, the lands in particular years bringing $5.00, $6.00, $7.00, $8.00, and once almost $10.00 per acre. The best average prices for large sales were received in 1860, 1861, 1863, 1864, and 1873. The last was the best, when 1,252 acres brought $12,490 or within a few cents of $10.00 per acre. Individual tracts sometimes brought $15.00, $20.00, and $21.00 per acre. The entire 20,000 acres brought nearly $120,000 or an average of $6.00 per acre. It goes without saying, however, that Murray could have received not more than 95 per cent of that amount, if we allow only 5 per cent for commissions and incidental expenses.

We are now prepared to summarize the business of this operator by placing all sums involved at compound interest and closing the books at the year 1880, the time when Murray received the final increments from his

sales. The result is, to say the least, surprising. We know, from the land office record, that he paid for his land in 1836 the sum of $25,000. Compounded annually at 5 per cent that would amount in 1880 to $215,000. Sales increments, after deducting 5 per cent for commissions, compounded at the same rate, would amount to $260,000 at the given date. We have left the problem of taxes. These were levied and collected by the towns in which the lands lay, and it would be practically impossible to find all necessary records for presenting the facts in detail. Still, enough typical instances were recovered from available tax lists to enable us to give a useful estimate, being careful to make this too low rather than too high. On a very conservative basis both of valuations and of tax rate, we find by compounding that Murray paid out sums which would have amounted by 1880 to at least $51,000.

To recapitulate:

His *outlay* was:	
Original investment, compounded	$215,000
Taxes, compounded	51,000
Total	$266,000
Receipts:	
Sales increments compounded	$260,000
Net loss	$ 6,000

Probably, if the full truth about taxes were known, the last sum would be $25,000 or $30,000 rather than $6,000. At all events, this case demonstrates that, as against investments in gilt-edged securities, the purchase of raw lands in Wisconsin territory for resale to agricultural settlers was a precarious business. Nor were there moral or social compensations for possible financial losses. The land speculator was nowhere looked

upon as a philanthropist, and while at the present distance from pioneer times the owners of land once held by Sir Charles Augustus Murray, Master of the Queen's Household, noted diplomatist, traveler, linguist, and writer may feel that they derive therefrom a kind of adventitious distinction, no such sentiment animated their forbears who had to pay more than the government's price for land derived from that source. To them he was simply a monopolist, grinding the faces of the poor for profit. His case was referred to censoriously in the first message of the first governor of the state, Nelson Dewey, who had personally bought several tracts of the Murray lands. It was never far in the background when legislators discussed the interesting question of limiting the amount of land any person might own.[2]

A more complete contrast to the Scotch nobleman could hardly be found than we have in another Grant County landholder of somewhat later date, Jacob Baumgartner. The history of this man, an actual pioneer settler in the town of Fennimore (township 5, range 2 west), is derived mainly from a fourteen-volume diary produced by him in the course of more than sixty years, and which, after his death in 1916, his family donated to the State Historical Society. It was kept mostly in German script.

Baumgartner, a Bavarian villager, had been apprenticed to a dyer and, as journeyman, traveled on foot some 5,000 miles through many of the states of Germany. In 1850 he came to America, worked at his trade at St. Louis, and afterwards near Jefferson,

[2] For a further account of the romance connected with Murray see the author's editorial article "Lands Across the Sea," in *Wis. Mag. of Hist.*, xiii, 417-429.

Wisconsin, was in the employ of a farmer named Freeman Bacon, from whom he learned considerable English while gaining his first knowledge of farming. He remained at Jefferson until August, 1853, having been married there the previous year. With the cash he had saved, some $250, he now proposed to buy land, going for that purpose to the land office at Mineral Point for directions, then to Lancaster and to Fennimore, where a friend showed him both privately owned tracts and government lands. Of the latter he saw one quarter-section which seemed favorable. But the young immigrant was foresighted and extremely cautious. Having some familiarity with Cassville, he went thither also and on the way found, on the upland east of the town, another fine quarter-section of government land.

Furnished with the proper descriptions, he now returned to Mineral Point, learned that both tracts were still open for entry, solved the heavy problem of deciding between the two, and bought for $200 the Fennimore quarter. This nearly exhausted his funds, but he had a pair of young oxen, a cow, and a few simple household necessities. However, there was no wagon and being bound to go to his land, build a house, and prepare for the reception of wife and child the following spring, he proceeded to build a wagon. Perhaps this might have been done better had he learned the wheelwright's rather than the dyer's craft, yet in a couple of days he had a vehicle which would roll over the ground and which would hold all the "plunder" that his oxen could draw. It was distinctly an "ox-mobile" affair, with solid wheels sawed from the trunk of a huge tree and bored for the axle. He fails to state whether or not he left the bark on for treads, but that would have been in character.

He now loaded the clumsy contraption, attached "Tom" and "Buck" and, accompanied by another land-looker, started out headed toward Madison. He passed through the capital city on election day when the streets were full of men, many of whom made mocking or humorous remarks about the strange land craft which screeched its slow way down State Street. But Baumgartner did not mind. He was proud, he says, to be riding in a vehicle which was his very own, and for which he had not been obliged to go in debt.

Following the military road, he found himself on the prairie west of Dodgeville when an accident happened which, in the case of a less foresighted man, might have proved very serious. One of the solid wheels split in two parts and fell off the axle. What now was to be done? It was all quite simple. The two friends got down and jacked up the wagon with fence rails. Then Baumgartner took from the wagon box another wheel, put it on the axle, fastened the key, signaled to the oxen, and drove on, having wasted not more than five minutes, all due to his preparedness in carrying a spare!

That winter, like its successors for many years, was a very busy time. Baumgartner first helped his traveling companion to buy a farm. They found desirable land near his own which was the property of a Mr. Pelton of Prairie du Chien and which rumor said could be bought at $2.00 per acre. They walked to Prairie du Chien, found Pelton, and learned that he was asking $800 for 160 acres. This was more than his friend could pay. But Baumgartner was clever at a bargain and in a couple of hours he had brought the price down to $460, when the sale was made. A 40-acre tract of timber was purchased by Baumgartner in conjunction with two partners. Then commenced the labor of getting out and

hewing house logs, rafters, cutting shingle bolts, and splitting shingles,[3] taking saw logs to the mill for flooring, roofing, etc., all of which were sawed for one-half the lumber they made. By the opening of spring his first house stood in readiness to receive the wife and child who came to Mineral Point on a public stage and were borne home in triumph behind "Tom" and "Buck," but not in the log-wheeled wagon.

That first summer Baumgartner, pooling his ox-power with that of two neighbors, broke 18 acres and grew some crop, for he had shrewdly selected part open land rather than all forest. But the following year (1855) he made a great change. Being offered $1,100 for his farm and improvements, he sold everything. A few days later he bought a quarter-section which was privately owned and had 22 acres of arable, for the sum of $800, and he expended nearly $200 of the balance for team, plow, wagon, and other farm equipment. There was no house, so, leasing most of his arable on shares to a newly-arrived German, he devoted several months of the summer to building a decent home, stable, fence, and in removing dead trees, burning trimmings, and otherwise improving his field.

He now was started, but he tells us the first years were characterized by excessively hard unremitting work, and by outlays for improvements which always exceeded incomes, leaving him chronically in debt. Still, he and his wife were so thrifty and so eager to free themselves that in the first year of the Civil War, with a good crop of wheat and a good price, he paid off the last of the outstanding obligations. This, to be sure, does not mean that he never afterwards needed to borrow money.

[3] To show how quickly his German became deformed through the substitution of English forms, his diary says *shindle* had to be *gesplit*!

In 1862, for example, his wheat crop failed, or nearly so, giving him from 65 acres only 305 bushels. Yet he built that year a good granary at a cost of $239, and a picket fence around his big garden (and young orchard) at an additional cost of $120.[4] Also he had but just bought an additional 40 acres of land for $225.

Baumgartner added to his acreage from time to time until, by 1877, his farm embraced 360 acres in a convenient form, all in sections 4, 5, 8, and 9 in township 6, range 2 west. Lying as it did on the upper fork of Fennimore Creek, where bluff and prairie meet, it was part rough and part comparatively level land. There was wood sufficient for farm and household use but not to make a serious problem of land clearing for cultivation.

Baumgartner was a man of medium size, with well-knit, serviceable frame. He was alert, keen, systematic, and tirelessly active. Nature, or early training, had imparted an inquiring, experimental turn to his mind so that everything he did on the farm partook of the creative and was to him endlessly interesting. Like all pioneers, he began as a wheat grower, on a modest scale, producing in 1863 only 409 bushels and ten years later 895 bushels. His largest wheat crop, that of 1874, amounted to 921 bushels. Thereafter it declined gradually while crops of oats, barley, and clover seed increased. It is noteworthy, however, that although wheat refused to pay dividends in the valleys as early as 1870, or even earlier, on his upland farm it was retained in the rotation with reasonable success till at least 1879, in which year he produced from 40 acres 667 bushels or at the rate of 16½ bushels to the acre. Even then he did not abandon it but, on a reduced acreage, made in 1891

[4] In the volume of the diary covering the years 1869-72, he gives us a complete diagram or plat of his garden, specifying all the plantings.

the respectable crop of 596 bushels. Rotation, including clover, good tillage, and careful seed selection in addition to favorable soil and location, explain this result. Wheat was a money crop and its relative permanence in Baumgartner's farm economy was a very definite aid toward making the farm pay.

The other main secret of his success was that he did not rely exclusively upon the wheat crop for his income. In 1878 he cleaned up 46 bushels of clover seed, worth probably as much as ten times that many bushels of wheat. Barley became an appreciable factor during the 1880's. Oats, however, increased steadily from the first, reaching by 1895 the aggregate of 1,726 bushels. Being all fed out on the farm, this constitutes the key to Baumgartner's live stock husbandry. He kept no diary record of his corn crops, because there was no such opportunity to measure these as the threshing machine gave him for the other grains. But here the census comes to our aid. In 1869 he estimated his corn crop at 400 bushels, and in 1879, from 50 acres, he produced 1,500 bushels, only a fair yield. That year he had 791 bushels of oats and 50 tons of hay. The record also shows 10 milch cows, producing 1,500 pounds of butter, 35 "other cattle," 25 sheep, 35 swine, and 250 head of poultry producing 1,000 dozen eggs. The estimated value of all his farm products of that year, as given to the census taker, was $2,000. According to the diary he had a cash income of $1,611.08 which seems to indicate that the above estimate was certainly conservative and probably quite too low.

Unlike many other German farmers, Baumgartner was willing to invest money in good breeding stock. An enterprising Irish farmer not far away was recog-

nized as one of the best shorthorn breeders in the county.[5] Baumgartner bought foundation animals from him and soon had a superior all-red shorthorn herd. His horses, sheep, pigs, were among the best in the countryside. His blue-grass and clover pastures for summer grazing, and his insistence on full and careful feeding, in warm barns, during the winter kept the animals in high condition at all seasons. He sometimes exhibited at local fairs, which he was fond of attending.

The Baumgartner family, while working hard and steadily, lived well as the diary records of weekly purchases at Boscobel or "The Center" (Fennimore) amply show. Young and old dressed respectably; they entertained much company, and visited neighbors frequently. They were also supporters and regular attendants of the German Lutheran Church.

As early as the years 1867-68 the "new house" was built. It was for the time and region a pretentious farm residence, costing for materials and hired labor (not reckoning the family's contribution in hauling lumber, quarrying stone, etc.,) $3,000. And in those days it was still possible to procure common lumber at Boscobel, where rafts from up the river were broken up, for $10 per thousand, and Baumgartner bought ash flooring for $40 per thousand. All window sashes, blinds, and moulding came from Whitewater. They cost $120 plus $5.75 for freight.

In an ordinary year during the 1880's Baumgartner paid out (and no item, though it cost but five cents was unrecorded) for all purposes around $1,300. But he usually managed to have a surplus from which he made loans to neighbors, to members of his family, or to

[5] Thomas Tormey, of Fennimore, leading exhibitor and prize winner at the county fair.

friends. He was no Shylock, and while generally demanding his own with usury, he was known to lend a friend as much as $500 for a few months without security, without taking a note of hand or any kind of receipt, and at only a nominal interest.

Jacob Baumgartner died in 1916 at the age of nearly eighty-six. The farm he made remains in possession of his youngest son, William Baumgartner. His oldest son, Nelson, emigrated as a young man to eastern Kansas where he farmed on a large scale, sometimes producing 10,000 bushels of wheat. He had four other vigorous sons who, giving him most of the man power required on the farm, of course were an important factor in his success.

Jacob Baumgartner not only gained for himself an independent position as a well-to-do farmer: he was a man of considerable local influence both among the German settlers and among the Americans. For many years he was annually chosen treasurer of his town; he was one of the directors of the local bank; he participated in local celebrations, once at least as a speaker using the English language. His never-failing courtesy, kindliness, and hospitality made him hosts of friends and he is not known to have had an enemy. It was land users like Baumgartner, rather than speculators like Murray, whose investments and activities made the lead region agriculturally what it has become.

CHAPTER XII

THE AGRICULTURAL TRANSITION

THE stiff prices for farm products which were an incident of the Civil War, and the subsequent inflation, gave impulse to agricultural development in the lead counties as elsewhere. This is shown in the avidity with which farmers bought speculator land in those years, in the extension of cultivation despite the deficiency of man power, and particularly in the enlargement of the food crop acreage through the use of machinery like the reaper and the horse seeder or drill. These were years of agricultural prosperity whose effects proved relatively permanent.

Notwithstanding the depression which followed, bringing hard times in the early seventies, figures of the ninth census are eloquent of the progress achieved during the decade. While the amount of improved land in our three counties had risen from 358,789 in 1860 to 647,318 in 1870, and the aggregate number of farms from 5,935 to 9,433, the cash value of the farms had advanced from $11,114,566 to $30,163,423.

Comparing the three counties, Grant stood first in number of farms, amount of arable, valuation, value of live stock, numbers of horses, cows, and swine. That county also produced more wheat than either of the others, but Lafayette led in corn. Comparing with other counties of Wisconsin, the lead region could boast several "firsts." Grant had more "other cattle" (as distin-

guished from cows or oxen) and also more swine than any other county, while Lafayette produced more corn than any other county, with Dane second and Grant third. In number of cows Grant stood fourth, being exceeded only by Fond du Lac, Dane, and Dodge; but in dairy products not only those counties but also Green, Jefferson, Rock, and Waukesha surpassed her. In wheat, Grant was surpassed by Fond du Lac, Dane, Dodge, and Columbia. The farms of the three counties averaged $3,200 in value, and their productions $930.

By way of summary, it may be said that the lead region had come to be recognized universally as one of the best farming districts of the state. As yet there was little specialization, save in wheat growing which, as testified both by the individual experience of Baumgartner, related in the last chapter, and by the relative positions of these communities among the counties of the state, was still a profitable line of production notwithstanding a positive decline in the yield per acre. Earlier censuses showed the preëminence of the southeast in wheat growing. The leadership now had passed to the west and north; but the uplands of the driftless area were not far behind the best of the glaciated regions in this respect.

An interesting comparison is among towns within the three counties. Beginning with Grant, Hazel Green stood first in improved lands, with Fennimore and Lancaster following; first also in the value of her farms, followed by Bloomington, then by Fennimore. In value of live stock, the order was Fennimore, Hazel Green, and Lancaster, and in wheat production, Fennimore, Glen Haven, and Lancaster. In the value of all productions, Fennimore stood first, with Hazel Green second, and Glen Haven third. Iowa County's outstanding

towns in amounts of improved land were Highland, embracing two townships, Ridgeway (the excessively large town referred to in Chapter X), Linden, and Mifflin; and the same towns, in a different order, showed the largest gross farm valuations, the largest live stock valuations, and the largest production valuations. But in wheat production there was a change, Dodgeville taking the place of Mifflin. Lafayette's most distinguished towns in the above respects were Elk Grove, Gratiot, Darlington, and Kendall.

The comparison just made proves that in all three of the counties the leadership had passed definitely to the prairie towns despite their transportation handicaps as against most of the valley towns. For, save in the southern part, the prairie farmers had a long haul to market. Wheat grown on many parts of the upland was carried to Muscoda, Boscobel, Avoca, and Arena on the Wisconsin, or to the Chicago-Galena Railway stations, Wisconsin Southern, and Mineral Point, distances ranging between eight and thirty miles. Returning teams in addition to ordinary farm and family supplies carried back lumber, all of which, as a rule, reached the ports on the Wisconsin River, or on the Mississippi, in rafts. Live stock was taken to the same markets on the hoof. In place of selling their enormous crops of corn, the prairie farmers fed beef cattle which when fat were generally marketed at points on the Chicago, Milwaukee, and St. Paul Railway. Their fat hogs, very numerous as we have seen, were likewise driven in great slow-moving masses, down the several valley roads to the railway. It was not an uncommon experience in the 1870's for a valley farmer, in returning from his marketing, to meet droves of from 100 to 500 fat swine "hogging" the highway to the distraction of his team. Several

neighbors usually associated together for the purpose, furnished a sufficient number of drivers, teams to carry corn for feeding en route, and other facilities for a longish stay away from home. Hog driving was a kind of early winter vacation experience for the young men of the prairies, not as exciting, indeed, as flatboating on the Mississippi, or as hog driving across the Alleghenies from Kentucky and Tennessee, yet affording some days of amusement, a chance to play practical jokes on one another, and occasionally on dwellers by the way. Some farmers preferred to slaughter their hogs at home during severe weather and carry the meat to the railway on sleds, to be shipped thence to Milwaukee or Chicago, with only natural refrigeration.

As early as 1870 it was understood among the people of these three counties that the "big farmers" were generally those who lived on the prairie. They cultivated most land, used most machinery, employed most hired help, paid highest farm wages, made most money. In the less favored parts of the same counties, where the land was rough or infertile, it became the custom for grown-up boys, before beginning on their own, to spend a season or two working for a farmer on the prairie in order to get the feel of the business as carried on there, to enjoy the cultivation of level tracts, and to obtain the high wages paid.[1]

The decade of the seventies, and the early eighties, witnessed a modernizing of transportation facilities for the prairie country so far as railways were concerned. Theretofore, the Chicago and Galena Railway to the south of the lead region, and the Milwaukee and Mississippi, or Chicago, Milwaukee and St. Paul skirting the

[1] Many of the above facts came under the author's personal observation during his boyhood in the Fennimore-Blue River valley.

Wisconsin River, constituted the basic rail outlets for all produce of the mining country. Now the Galena and Southern Wisconsin Railway, a narrow gauge affair, was built from Woodman on the Wisconsin, to Lancaster, with a spur from Galena to Platteville and thence to Montfort, and in 1881 the high line was completed from Madison to Montfort.[2]

The agricultural history of the period might be expected to reflect these significant developments, and the census of 1880 contains our best general record of the history up to that point. That census, thanks to the wisdom and the organizing ability of General Francis A. Walker, director, and the encouragement of Carl Schurz, secretary of the interior, gives a much more complete picture of agricultural conditions than any of its predecessors.

The "revolution" was not yet apparent, but there had been since 1870 a general trend away from wheat growing, with a corresponding emphasis on the other cereals especially corn and oats, together with much stress on live stock. Grant, the largest of these counties, had more cattle, aside from milch cows, than any other county except Dane, and the most swine of any county in the state. She also had more corn than any other county and the immense crop of 1879, totaling 3,408,000 bushels, was made from 94,898 acres, or at the average rate of 36 bushels per acre. The other two counties both produced their proportion of corn and oats and also their due proportion of cattle and swine. None of these counties were distinguished for wool or mutton, they had a smaller proportion of milch cows than Green, Walworth, Waukesha, Fond du Lac, Dodge, or Dane;

[2] W. H. Stennett, *Yesterday and Today, a History of the Chicago and Northwestern Railway System* (Chicago, 1910), 165.

and in dairy productions as a whole they as yet stood well down in the list of counties.

In order to establish a solid basis for generalizations, a complete canvass by towns was made from the manuscript census schedules. The farms are described on blanks with spaces for ten descriptions to the page, and it is a simple matter to select from each page such farms as show a generous *business* income, which for convenience we set at $2,000, though obviously those farmers who approximated such an income were in fairly prosperous circumstances. In most cases a note was made of the highest and lowest incomes shown by each ten-farm schedule; and when a gross estimated income of $2,000 or more was encountered, the farmer's name was transcribed, and the main items of production entering into the total, recorded.

This process of analysis has its difficulties. The Census Bureau's instruction calls for the "Estimated value of all farm productions (sold, consumed, or on hand) for 1879." Such estimates, in a large proportion of cases, were mere guesses and often went wide of the mark. The crops of small grains, measured at the threshing machine, could be reported with reasonable exactness. But in corn, butter, milk sold, etc., the estimator was apt to be far out in his reckoning particularly when the enumerator was lazy, careless, or incompetent, which appears not infrequently to have been true. In some instances he evidently filled long series of schedules without consulting the owners of the farms described, merely recording his own guesses as to the incomes and how these were made up. He allowed the owner sometimes to include as income the capital invested in his farm, machinery, and live stock. Again, he permitted him to state what obviously was the *net*

rather than the *gross* income. Consequently, a good many alleged incomes are much larger than the components noted will justify and, on the other hand, a certain proportion of the very small incomes are absurdly out of harmony with the facts as shown in the schedules themselves. For example: a certain farm in Lafayette County was assigned an income of $50. It had 70 acres of tillable land and was valued at $2,500. No live stock was listed, but there was a crop of corn, estimated at 600 bushels, the same amount of oats, and 36 bushels of wheat. This would represent an income worth not less than $500 or ten times the amount assigned in the report. Some fairly good farms showed no incomes at all, doubtless, due to the fact that the census is a personal record of farmers, not farms, and new people were in control of them who had raised no crop the preceding year. Occasionally that fact is noted on the blank.

The reader of the record can sometimes check the result but often not. One difficulty is the absence of exact information about the live stock sold. There is nothing at all to show horse sales. The schedule for cattle calls for the number of "working oxen," "milch cows," "other cattle," "calves dropped," animals "purchased," "sold living," "slaughtered," "died, strayed or stolen." Now, it is usually easy to determine whether the individual farmer was a stock feeder, buying cattle, fattening and reselling. But there is nothing to show what profits or losses these transactions involved. Hogs were a very important item in the income of farmers in our region at this period, yet the schedule merely calls for the number of "swine on hand June 1, 1880." It elicits no information about the numbers sold in 1879. Also, instances occur where the income was probably derived

from farm trading—buying and selling live stock—rather than from legitimate farming operations.

For all these reasons, a small proportion of both the large assigned incomes and the small ones had to be rejected as contradicting the facts brought out in the schedule of specified productions. These rejections, however, do not vitiate the general results. Incomes which equal or exceed $2,000, together with the names of the exceptional farmers making them, will be found in Appendix III.

The study has disclosed the characteristics of southwestern Wisconsin agriculture at the close of the eighth decade. As already stated, wheat was on the decline, yet it made an appreciable part of about half the farm incomes. Corn, hogs, and cattle were the chief reliance, but oats was a favorite crop to be fed out on the farm, there was a small amount of barley grown for sale and farmers generally were growing some flaxseed. Cattle were everywhere, but the herds were not composed wholly or even principally of milch cows. By far the largest number came under the designation "other cattle." These were a mingled mass of steers, heifers, and dry cows, but it is known from other sources that the tendency among feeders was to buy steers principally.

A large proportion of the prairie farmers, who raised huge crops of corn, were engaged in feeding cattle and in fattening hogs. Some had many superfluous horses from which sales were made which received no recognition in the census. Most farmers sold butter, but the amounts were small. Only a few sold whole milk, of course to supply local markets. Poultry was a universal feature of the farm economy, but there were no special

poultry farms. Some orchards existed and a few vineyards.

The business income test effects a sharp separation among the towns in each of the three counties, enabling us to declare with some confidence which were the economically superior farming communities and which the backward ones, under the existing farm economy. It is taken for granted that where a town shows no income reaching the $2,000 level, there farming was at a comparatively low ebb, the land probably unfavorable or agricultural leadership lacking. Even if one, or two, or three such incomes appear, the town may still be agriculturally stagnant. On the other hand, where a considerable number of the farmers enjoy incomes of $2,000 or over, there must have been such evidences of prosperity patent to the entire community as would affect the general tone of the local agriculture. We arbitrarily draw the line between towns having three or less, and those having four or more such incomes.

As would be expected, both from its size and its proportion of rough lands, Grant County had more backward towns, both proportionally and actually in 1880 than the other two counties. She had twenty towns in the "low" list and only twelve in the "high"; and among the low towns ten had not a single income reaching the $2,000 level. These were Boscobel, where the highest income recorded was $1,400; Castle Rock, $1,500; Liberty, $1,250; Millville, $1,725; Muscoda, $1,700; Waterloo, $1,697; Watterstown, $1,819; Wingville, $1,900; Woodman, $1,000; and Wyalusing, $1,650. Cassville, Ellenboro, Harrison, Hickory Grove, Mount Hope, and Paris had each a $2,000 income; Beetown, Jamestown, and Little Grant 2 each (though Jamestown's are both doubtful), and Marion had 3.

In the other list two towns, Bloomington and Lima, had but 4 generous incomes, and Smelser 5, all others having 7 or more. The highest number, 19, was in Fennimore and that town had the largest single farm income (not considering a doubtful income in Lafayette County) made in the three counties, $9,000, on the farm of Dwight L. Parker. Cattle, which were bought, fed, and sold, to a large extent, were a main source of that income. Lancaster had 16 large incomes, Ed McKinny having the highest, $4,000; Platteville 15, the best being that of Frank Huntington, $4,800; Patch Grove and Clifton 12 each; Hazel Green and Mt. Ida 11 each; Potosi 8—all from that part of the town called British Hollow—and Glen Haven 7.

Among Iowa County's thirteen towns, the majority (seven) fall in the high list. They are Arena, Linden, Mifflin, Mineral Point, Ridgeway, Waldwick, and Wyoming—two lying on the north slope, toward the Wisconsin, four on the watershed of the Pecatonica, and one blanketing the ridge. Arena and Wyoming contain much rough land, but some fine breadths of alluvial and of Knox silt loam in the valleys and on the uplands. Coupled with the presence of a group of thrifty, intelligent farmers,[3] many of them Welsh immigrants, these townships were partially redeemed from the fate of other rough townships in Iowa and Grant counties.

A surprising fact is the presence of only a single $2,000 income in the large and reputedly fertile town of Dodgeville. While this town lies on the south slope, its surface is much eroded by the headwaters of the

[3] Wyoming's seven generous incomes were made by three Lloyd-Joneses, William Ward, Clark Hickox, James T. Bernard, and Henry M. Lerake. Arena's seven by William Whitt, Robert McCutchin, William Rowe, Thomas Jones, William Caldwell, John Wilson, and Evan and Thomas Thomas.

south-flowing streams, and in part its prairie phase is covered with the Dodgeville silt loam. The difference between that soil and the more common Marshall silt of the prairies is that the subsoil of the latter holds a stratum of loess which is believed to explain the tall grass association entering into the composition of the black prairie soil. Be that as it may, the two best towns of Iowa County, Linden and Mifflin, the first with nineteen large incomes, the second with twenty-nine—the banner town of the three counties in 1880 as it was in 1860—are largely covered with the black prairie soil, while not only Dodgeville but also Mineral Point, Waldwick, and Ridgeway (and, as it is now called Brigham), have much of the gray Dodgeville silt and likewise considerable land of rugged conformation. The last remark will apply with special force to Moscow, Iowa County's southeasternmost town, and to Highland, Clyde, and Pulaski on the north slope. It remains to be seen how the agricultural revolution based on a dairying and pasturing economy may alter the relative status of these groups of towns.

Lafayette County has a more uniform surface than either of the other counties. Save for the river trenches, which are here less deeply eroded (or more filled up) than toward the heads of the Pecatonica and Sugar rivers, the country approximates rolling prairie in surface character, though much of it, as we have seen, originally was thinly covered with hardwood timber. Several towns were in the main strictly prairie in character. Such were, in particular, Shullsburg, Gratiot, White Oak Springs, and Monticello, parts of Belmont, Kendall, Elk Grove; also some sections in Benton, Darlington, and Fayette. Much of the balance, though originally timbered, was fairly level, though in considerable areas the soil is light.

Now it is a striking difference to the other two counties that Lafayette had no town which failed to report one or more of the generous farm incomes represented by the $2,000 lower limit. In one case, however, Willow Springs, where such an income is assigned by the census taker, the record is obviously wrong. Three of the other low towns, New Diggings, Wayne, and Wiota, are assigned 3 each, and Blanchard 2. Among the high towns Gratiot leads with 21 incomes, the highest, that of Michael Doyle being $5,405. Belmont stands second with 14, Allen Kies' reaching $5,550; Argyle third with 12; Seymour with 10; Benton and White Oak Springs 9 each; Fayette and Shullsburg with 8 each; Elk Grove 6; Darlington and Kendall 5 each, and Monticello 4.

An inquiry having more than the ordinary interest, is with reference to the relative agricultural prosperity of the distinctively mining towns. A glance at the Chamberlin atlas of lead veins will reveal that among all the towns having under surface works those apparently most affected by them agriculturally were Hazel Green, Jamestown, Platteville, Potosi, and Beetown in Grant County; Benton, New Diggings, Shullsburg, and White Oak Springs in Lafayette; and Mineral Point, Linden, Ridgeway, and Dodgeville in Iowa. Other towns, however, like Argyle, Wiota, Mifflin, Highland, Belmont, Elk Grove, and Wingville, had mines which may have left their effects upon agriculture. Of the towns first named, nine are in our high prosperity lists, four in the low; to be sure, simply on the showing of a good proportion of business incomes.

One obvious reason why average farm incomes in the mining towns might possibly be lower than in the non-mining, in the transition period between the mining and agricultural economics, is the compulsory transfor-

mation of a good many mining lots into uneconomical farms. A "farm," under the census definition, was three acres or over. No very small areas were bought of the government, and anyone who proposed to create a farm outright was sure to want at least forty acres to begin with and more as soon as he could acquire it. But, when the miners struck water, and had to quit digging, a certain proportion of them were compelled to cultivate the small tracts on which were their mining claims and where they had established their homes. It was not a question of farming in a business way, but of raising supplies for a family which had to be supported by some means.

The result in some instances was startling. New Diggings, for example, among its 155 farms, had 13 farms showing $100 or less of gross income for the year 1879. Benton, with 151 farms, had 18 in that class. On the other hand, Belmont had only 3 such insignificant farms, Blanchard 5, Darlington 2, Fayette and Gratiot each 8, Kendall 5, Wayne 3, Willow Springs 2, and Shullsburg 1; while Monticello, Seymour, and White Oak Springs had none. Of course, the presence in any town of 10 per cent or more of the kind of farms whose total productions are negligible depresses the average. But that was one of the hangovers from mining which was sure in time to disappear, as it had already done in several mining towns. The small farms were destined in most cases to be sold to larger farmers while their former owners emigrated to Nebraska, the Dakotas, or Montana.[4]

[4] In the Wisconsin Academy of Sciences, Arts, and Letters *Transactions* (Madison, 1901), xiii, 188-281, is a series of papers introduced and sponsored by Professor O. G. Libby, then of the University of Wisconsin, entitled "An Economic and Social Study of the Lead Region in Iowa, Illinois, and Wisconsin." The study was made by Mr. Libby and his seminary in western history mainly during the college year 1898-99. The tentative conclusion is that the distinctively mining towns were agricultur-

It should go without saying that the towns which were receiving new settlers for their reserve farm lands, mainly those on the north slope having a rugged terrain, showed some inadequate incomes also, symptomatic of the newly begun farms. For example, in Iowa County the town of Clyde had 3, Highland 3, Arena 3, Wyoming 6, and Pulaski 11. But Dodgeville had 18, Linden 12, Mineral Point 17, and Ridgeway 26; while towns similarly located, where mining had affected little or none of the surface, had less. Thus, Eden's share was 3, Mifflin's 2, Moscow's 7, and Waldwick's 5.

The eighties and nineties of last century constituted an era of emigration from southern Wisconsin as a whole, and there is nothing surprising in the statistical fact that all rural towns lost population save as special local conditions like railway building counteracted that influence. Those losses were by no means confined, in our three counties, to the lead-mining towns; nor were they on the whole more marked in those towns than elsewhere except as stated above. In fact, between 1885 and 1895, Argyle increased her population from 1,187 to 1,355, Wiota from 1,696 to 1,716, and Mifflin from 1,398 to 1,557. All of these were among the mining towns though not of the most prominent group. On the other hand, Fennimore and Patch Grove, non-mining towns, both lost population to a considerable extent, the former dropping from 1,259 in 1885 to 794 in

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ally and socially backward, as compared with the non-mining towns. They were found in comparison to be losing population, to be behind in *per capita* farm wealth, and farm productions. Elaborate statistical tables are presented to prove these points; but the statistics themselves receive little or no interpretation. What has been written above may explain most of the phenomena mentioned. If the mining towns were backward at all, it was owing mainly to the reasons we have stated. Of course, some of the other towns, settling up later and receiving impulses from new railway construction, would gain in population while the mining towns, over-populated under the single industry of farming, were bound to lose.

1895, the latter from 743 to 662. In fact, most of the towns of our three counties, in their rural phases, lost population during that decade marked so strongly by the prevalence of the "Dakota fever."

The most satisfactory way to determine whether or not the mining towns were relatively distressed agriculturally, will be to canvass the production records for *living* incomes. In 1880 farmers were regarded as reasonably prosperous if their gross productions aggregated as much as $1,000 while families made out to live decently on half that amount. The proportion of such incomes, therefore, will show how generally comfortable the farm population was. An additional test will be tenancy, for it may be suspected that the proportion of rented farms has some relation to the proportion of inadequate incomes, though a different interpretation is also possible as we shall see.

A complete canvass of the manuscript agricultural census of 1880 for the seventeen towns of Lafayette County shows that the four selected both by Mr. Libby and by us as preëminently mining towns—Benton, New Diggings, Shullsburg, and White Oak Springs—averaged 30½ per cent of four-figure incomes; that is, nearly one-third of the farms showed aggregate productions in 1879 of $1,000 or more in value. The thirteen remaining towns, under this division, made an average of 32 per cent of four-figure incomes, proving the difference in that respect to be negligible.

Tenancy in the two groups, however, follows a sharper curve. In the first, the farms occupied by tenants were almost exactly 27 per cent of the total number of farms; in the other group of thirteen towns they constituted only 18 per cent of the whole. Now, a comparison of the kinds of farms that were occupied by tenants

shows that they differed little if at all in the two groups of towns. Some were insignificant tracts of 6, 10, or 15 acres, valued at $75 to $1,000 and producing $75 to $200 worth of incomes. Others had from 40 to 220 acres of arable, were valued at $1,500 to $5,000 or even $12,000, and produced $600 to $2,000 incomes. For some reason, possibly the age of their settlements, the four towns of the first group were more given to leasing their farms than were those of the other group. Yet, the fact does not appear to have affected the living conditions of the farmers however much it may have tended to reduce the later productiveness of the farms. Tenant incomes, on the whole, averaged with owner incomes.

But short-term tenancy is proverbially bad for the land, and it is also inimical to the live stock interests of farms. It will, therefore, not be surprising if the farms of the mining towns shall later show deterioration in productivity, and they will be almost certain to lag behind in stock raising and dairying. But the reason will be the prevalence of tenancy, and not any kind of agricultural inferiority in the people who owned the lands. In fact, since tenancy is promoted by prosperity, it is reasonable to ascribe its greater commonness in the mining towns to the circumstance that more of their farm owners were in condition to retire than was the case among the farm owners of the other group of towns.

It might be expected that no such increase in improved lands, in number of farms or their value, would take place within given periods after 1880 as before that date, and we are not surprised to find from the census statistics that the total number of farms in our three counties decreased in the twenty years, 1880 to 1900, from 9,329 to 9,267. The process was an incident of the emigration furor, for when numbers of farmers are pre-

pared to sell out cheap, others, usually the economically stronger, are ready to buy farms adjacent to their own and incorporate them with their former holdings. It was in this manner that some of the smaller farms in the region ceased to exist independently. The total acreage in the farms, however, increased during the twenty-year period, and the value of the farms rose from $29,310,318 to $51,595,640, which is moderately revolutionary. Also, the value of productions had risen almost exactly 50 per cent notwithstanding that the later census excluded what had been fed out on the farm, while that of 1880 reckoned in everything. Into the aggregate of productions there entered nearly $2,000,000 of dairy products which, on a moderate calculation, represents more than a million and probably one and a half millions of actual gain in value of dairy products between the two dates: for, as late as 1885 the total butter and cheese products of the three counties was only $741,800.

Here was an increment of $162 per farm, on the average, or, assigning it all to those farms which reported dairy productions, 95 per cent of the whole, somewhat more. But this was by no means the measure of the value of dairying, under the new conditions, to the farms of the three counties. Dairying formerly had been a household industry incidental to the general operations of the farm, similar to the poultry industry. In the coming of the cheese and butter factories, as pointed out elsewhere,[5] it became a definite business feature of the farm economy, and it had the effect of extending business and scientific principles into all departments of farm experience.

In portions of our three counties, if not in all, the monthly dividends from cheese factory or creamery

[5] See the author's *History of Agriculture in Wisconsin*, chap. ix.

caused the abandonment of credit buying, substituting the cash system with its well-understood economies. The size of the monthly check tallying with the amount of milk produced, farmers had a living motive to keep up and increase the daily product, which induced better feeding and care of cows and particularly a process of weeding out "boarders" and substituting profitable animals. Rivalry among neighbors intensified the interest and stimulated the acquisition of better breeding stock, better housing, better pastures. Much former waste land was cleared up to enable it to grow the native blue grass, or else was seeded to various tame grasses. In the bluff and valley districts of the north slope a veritable pasturing revolution took place; for, instead of sending out the herds in summer, for a precarious sustenance, onto the unfenced "bluff" common, where they could gather the thin grass for a few weeks and exist on the browse for another space, as previously had been the general custom, farmers began regularly to pasture the lowlands along the creek bottoms from which, in the earlier time, hay—good, bad, and indifferent—had been gathered for winter feed. Frequently freshets submerged the mature grass before cutting, rendering it almost worthless for fodder, and sometimes the entire crop when in the cock was floated away toward the Wisconsin. As grassland for pasturage, however, these alluvial tracts were ideal.

Now that a regular and full supply of winter feed was indispensable, dairying having made the primitive straw-stack feeding ridiculous as well as wicked, hay became a cultivated crop, like corn, and was grown on the lands which were safe against floods. The result was doubly significant, making both for improved pasturage and surer fodder supply. And, while the former

decaying wheat lands yielded good crops of oats, corn, and clover, the rough, stony bluffs grew their natural crop of timber, much of it valuable oak and hickory.

There is no doubt that the "revolution" was more noticeable in the region just described than it was, or ever became, in the less rugged terrain of the south slope, or on the prairies. This can be made clear by presenting a few comparisons. In Grant County perhaps the most typical rough township is comprised in the town of Castle Rock where in 1905 were 111 farms containing 8,152 acres of improved land and 14,593 acres of unimproved—an indisputable proof of its ruggedness. The valuation of Castle Rock's farms (then numbering about the same) in 1880 had been $121,735 and of the total productions $39,105. But in 1905 the valuation of the farms had risen to $416,200 and of the productions to $129,279. That is to say, valuation had increased three and four-tenths times in twenty-five years and production values had increased in nearly the same proportion.

Cornering with Castle Rock at the southwest was the town of Fennimore already described as lying largely in the prairie. In 1880 that town was so far ahead of Castle Rock that no comparison could be made between them. Its 131 farms were valued at $524,905, or more than four times that of Castle Rock while its production value was $154,025 which also would nearly quadruple that of the poorer town. But in 1905 Fennimore's farm valuation was $806,150, or less than twice that of Castle Rock, and her production value was $200,629, a yet smaller proportional increase.

Hazel Green, one of the best of the prairie mining towns had 132 farms in 1905, valued that year at $738,874 as the number is printed in the state census of that year. That is doubtless a misprint for $1,738,874

which figure we shall use. The value of all farm productions totals $300,568 as against Castle Rock's $129,279, or only two and one-third times the latter whose farm valuation was less than one-fourth as high. In 1880 Hazel Green's farms were valued at $1,037,750 and her productions at $149,455. Productions had doubled in Hazel Green during the quarter-century; they had more than trebled in Castle Rock.

A similar, though less striking result, emerges from a comparison of the rough north slope town of Wyoming in Iowa County and the famous prairie town of Mifflin already familiar to the reader. Mifflin's farms were valued in 1880 at $811,735 and in 1905 at $1,372,910. Her productions in 1880 totaled $168,070, in 1905, $264,727. Wyoming, with 117 farms showed a valuation in 1880 of $262,203, and a production total of $82,990. In 1905, the valuation was $524,210, the productions totaling $145,321. The dairy cow, indifferent to surface features, so long as the grass was succulent and rich was bridging the gap between the smooth, enticing prairie farms, and the rugged, bluff and valley farms of the north slope.[6]

Dairying, however, did not wholly supersede the earlier interest in beef cattle, especially on the larger prairie farms. Some farmers refused to be "tied to a cow" and continued raising, buying, and fattening steers, which has usually been fairly profitable where the farms contained ample natural pasture lands. The rough lands about the stream heads, supplied with running water and covered with a dense growth of blue grass are especially designed to make young stock thrive.

[6] But compare Vernor C. Finch, "The Service Area of Montfort," Appendix IV. This paper presents a striking picture of the differences still noticeable between the prairie farms and those in the upper, narrower and steeper portions of the north slope.

Such pasture feeding, supplemented when the animals reach the proper age with a period of fattening on a corn ration, produces the "top notchers" of the Chicago stock market which are called for the region from which they come the "Mineral Pointers." Needless to say, all three of these counties produce such choice animals.

Thus it has come about that, while the majority of the herds are black and white Holsteins, with scattering pastures containing Guernseys, Jerseys, or Brown Swiss—all dairy breeds—there is more likelihood of the traveler in these counties encountering the old favorite Durhams, Herefords, Black or Red Polled cattle than would be the case in most of the other counties of the state. The prairie farmer has something of the rancher's fondness for "steers."

It is no longer easy, however, under the wide prevalence of a dairying economy, for farmers to stock up with steers for feeding. Some visit the markets of Chicago, St. Paul, or Kansas City, buy young animals, one or two years old, pasture and winter feed one or two seasons, and sell them fat at Chicago. Others buy the best beef-bred calves still to be had which are usually not very good. A herd of steers containing a large proportion of black and whites, or of slight fawn-colored animals, is something of a joke, but what can the feeder do when he is dependent upon the dairy farmer for his stock cattle? The business of raising baby beeves, to be bred on the farm, has not yet even a start in this region.

Horses, which forty years ago constituted one of the major live stock interests, are today a negligible one. If reared at all, the object is merely to produce stock to replace the aging farm animals, not to supply the market for draft teams. In fact, some of the work an-

imals on the farms of the lead counties have been imported from the large horse ranches of western South Dakota or of Montana.

Hogs continue in favor as "mortgage-lifters," and corn is more of a staple now than it was formerly because in the form of silage it feeds dairy cows and as ripe grain it fattens the hogs and steers. Lafayette is probably the best corn producer of the three counties, though the southern part of Grant and the southwestern towns of Iowa also produce notable corn crops.

The most striking result of the land utilization survey described in Appendix IV is its disclosure that agricultural production sometimes depends upon the racial origin of the cultivator. Professor Finch found that the tobacco growers of the Montfort area, without exception, were farmers of Scandinavian birth or descent. As much as fifty years ago small garden patches of tobacco were to be seen on the farms of Norwegian settlers. These more recently became field crops and, under the stimulus of profit, have become widely distributed.

CHAPTER XIII

TOWNS AND VILLAGES

THE lead-producing counties have witnessed the developments of a full century in mining, agriculture, trade and industry. Their history includes stories of the beginnings of scores of villages in the mines, at the steamboat landings, and along the railways. But most of these have either decayed or disappeared entirely, their buildings being removed to the open country to serve the farms, or to new points of concentration, usually at the railway stations. Some early establishments, to be sure, proved permanent and names like Mineral Point, Shullsburg, Platteville, Dodgeville, Hazel Green, and Potosi among the lead mines, Cassville, Muscoda, and Helena on the two great rivers, have been household words in the region for three generations. Nevertheless, the census enumerators in 1930 were unable to find in the three counties a single municipality which contained as many as 5,000 people and the only considerable city in the entire "Upper Mississippi" lead district, as it used to be called, is Dubuque, Iowa. Here is proof that the one-time mining and later farming country is still preëminently rural in character.

A closer statistical analysis yields the following: in 1920 the three counties of Grant, Iowa, and Lafayette had a combined total of 80,550 people of whom the incorporated cities and villages contained 34,848 or 43 per cent. The ratio had been increasing, since only 38¼

per cent of the larger total of 81,590 in 1910 lived in such incorporations and of the 82,954 in 1900 only 33⅓ per cent were in the villages and cities. Yet, the largest city at each of the census periods was Platteville which at its maximum (1910) had but 4,452 persons, many of whom were retired farmers, as were a large proportion of the villagers throughout the three counties, thus emphasizing the rural aspect of life.

Galena, Illinois, having been the metropolis of the lead region during the entire early mining period, a few words about that village and city are called for by way of introduction. Galena is located in the trench of Fever River, about six miles from where that stream joins the Mississippi, being accessible to the river steamers which monopolized transportation. Beginning at the river bank, on both sides, the city finally covered the abrupt hillsides which flank the narrow strip of alluvial ground, producing a rugged, picturesque effect.

Like so many western towns, this place was originally a trading post for the Sauk and Fox Indians. In 1826 Lieutenant Martin Thomas, superintendent of the lead mines, made the first plat and at that time the name Galena was given it by the settlers, who were not in all respects satisfied with the older designation "Fever River." Jesse W. Shull, Dr. Samuel C. Muir, François Bouthillier, A. P. Van Metre, and Thomas H. January were among the earliest settlers and traders known to have been active at Fever River or "The Point," as it was often called, several of these persons having been seen on the ground in 1819. The Buck Lead, Cave Lead, and other rich diggings lying in the immediate vicinity, Galena naturally became the center of the mining activity which position she maintained through her service of supply and of lead shipment. As mining ex-

tended northward to Gratiot, Hazel Green, New Diggings, Dodgeville, Mineral Point, Platteville, and other centers, the Galena commission merchants became commercial intermediaries between the producers of lead and the St. Louis or eastern merchants.

By 1839 the town was reported to have a population of 3,000. The original list of occupiers of lots, all of whom received their building permits from the lead superintendent, had numbered about 300, among the names being those of many of the most noted miners, smelters, and business men of the later developed Wisconsin mining district. Rev. Aratus Kent, first Presbyterian missionary, who came to Galena in April, 1829, and who discovered no other clergyman of any denomination on the Mississippi above St. Louis, found Galena a village of 200 houses. It was "compactly built on two streets or benches, one about 20 or 30 feet above the other, closely copying the circular direction of Fever River in front and a high bluff of 100 feet immediately in the rear. The hum of business is heard on the margin of the river" he says, "while abundant scope is afforded for the display of taste in the little yards and gardens which seem already to be creeping up the steep ascent of the surrounding hill. Here are thrown together, like the tenants of the graveyard, without any order, people of every country and every character and you may see in one day Indians, French, Irish, English, Germans, Swiss, and Americans and such a variety of national customs and costumes as are rarely to be met with in any other place. . . ." Kent noted that the vices of "Sabbath breaking, Profane swearing, the free use of strong drink and the practice of Gambling" were exceedingly prevalent; yet he was impressed with the intelligence, courtesy, and genuine worth of the leading

citizens.[1] Fundamental industries, transportation, education, religion, the theatre, and other forms of civilized amusement including horse racing, attained an organized character at Galena at very early dates, due to the progressiveness of her people and their sense of responsibility to the lead region inclusively. Galena, however, notwithstanding obvious advantages, failed to become a large town, and has been forced to yield in a business way to her neighbor, Dubuque, across the river.

Mineral Point for a generation or more was the most important municipality in the Wisconsin mining counties. This was due to her central location, her position as county seat from the year 1830, the construction of roads radiating in all directions, the establishment there of the United States Land Office for the Wisconsin land district, and the richness of the mineral district closely surrounding the town. Next to its mines, the most dynamic of these influences was the land office, an institution whose business affected every settler in the three counties, all of whom had to visit Mineral Point at some time and to all of whom that place symbolized the United States government's relation to settlers on the public domain.

The land office was opened in October, 1834, when the village was something more than six years old and had gained much publicity as the county seat of Iowa County and as grand headquarters during the Black Hawk War. The list of its distinguished citizens, as given by Stephen Taylor,[2] conveys an impression of the virility of its founders.

In January, 1845, Zenas Eddy, representing the

[1] Letter of June 4, 1829, and later letters. Photostats, Wisconsin Historical Library.

[2] See *ante*, pp. 48-49.

American Home Missionary Society, reported 1,500 people in the village of Mineral Point who had been assembled from nearly every country of the western world. He had preached at one and the same time to English, Irish, Scotch, French, Swiss, Germans, Norwegians, Dutch, New Brunswickers, Canadians, people from all the New England States, the Middle States, the South: also those called "Hoosiers," "Wolverines," "Buckeyes," "Badgers," and "Suckers." Eddy found Mineral Point society far less wicked than the report of it implied. Temperance work had triumphed, gambling had gradually grown less respectable, and there was a wholesome interest in religion as shown by attendance at the several churches of which the English Methodist seemed to be leading. "Sectarianism" was not prominent. He could learn of no "Universalists, Unitarians, Campbellites or Mormons"; there were but few Episcopalians and among them "Thank God, not a single Puseyite." The principal handmaid to Methodism, which was rampant and rabid according to this Presbyterian witness, was Freemasonry, strongly promoted by Major John Hawkins Rountree of Platteville who organized the first lodges at Mineral Point and Platteville in 1842. Eddy summarized his report by declaring that "on the whole, the morals of the place would compare favorably with those of most Eastern villages."[3] He shows much respect, also, to the intelligence and enterprise of the people.

The natural inference from Eddy's statement is that the body of inhabitants of Mineral Point in 1845 was almost hopelessly polyglot and yet, on a closer view, the

[3] Letter dated January 1, 1845, Mineral Point. Eddy arrived in the town from the east on the fifth of November, 1844. Photostat, Wisconsin Historical Library. Cf. Theodore Rodolf, "Pioneering in the Wisconsin Lead Region," *Wis. Hist. Colls.*, xv, especially 379-387.

exact opposite proves to be the case, for the census of 1850 reveals an enormous preponderance of English-speaking people made up of only three elements, British, Irish, and Americans with an almost negligible group of foreign-language settlers nearly all of whom were German. A hand count shows the presence of 508 heads of families. Of these 311 were English, 49 Irish, 6 Canadian, Scotch, and Welsh, and 108 American, making a grand total of 474 English-speaking families. Against these were 28 Germans, 2 Norwegians, 2 Swiss, and 2 French families, or 34 altogether. The fact that the English (mostly Cornish), constituted three-fifths of the families, goes far to explain both the good average character of the community and also its prevailing Methodism, for the Cornish miners, though by no means always temperate in their habits, were usually a law-abiding and a God-fearing folk. The American element, to which Pennsylvania and New York contributed in a leading way, was by this time much more largely from the Northeast than from the Southwest, or South. The total population of the *town* was given as 2,584, while the *village* was said to contain 1,990 persons or something less than four-fifths of the whole. Mineral Point by that time was fully established as Wisconsin's lead district capital; it had attained nearly its destined maximum population and had achieved a measure of social stability.

As in other towns of these counties, many of the inhabitants were going to California, but new immigrants, especially Germans, were coming in to take their places. Thus the non-English-speaking element was growing relatively to the other. But time would operate here as elsewhere to make foreigners over into native Americans. Occupationally, the miners led with 290, farmers

following with 47. Then came carpenters 19, merchants 18, stonemasons 15, clerks 14, blacksmiths 12, lawyers 10, shoemakers 10, and tailors 9. There were also 6 butchers, 6 tinners, 5 ministers (one of them a Catholic priest and one an Episcopalian rector), 5 physicians, 4 taverners, 4 school-teachers, 4 saddlers, 4 printers, 3 brewers, 3 druggists, 3 cabinetmakers, and 3 office holders. Of painters, gardeners, gunsmiths, students, and "laborers," there were 2 each, while the digit 1 represented numerically the professions of editor, land agent, tallow chandler, brickmaker, turner, jeweler, surveyor, baker, jailor, and iron moulder.

The above analysis of the population throws light on the physical appearance of the village, so many of whose oldest surviving houses are built of stone, in "west of England" cottage style. There is a quaintness about the village, even today, which persists from the pioneer epoch. The long High Street, adapted to the slope of the bluff down which it steeply winds, the variously angling side streets, crossing or flanking the gullies, the great road along the base of the slope; surface evidences of an older mining activity in front of the town, and the extensive zinc-oxide manufactory in the narrow creek gulch—all contribute to impart the aspect of uniqueness to this century-old city.

Some of the leaders of Mineral Point, as suggested in earlier chapters, were territorial and state leaders as well. General William Rudolph Smith, who came from Philadelphia, the scion of a distinguished aristocratic family and sometimes affecting the dignified revolutionary costume, was prominent for many years, though not especially powerful politically. Moses M. Strong, from Rutland, Vermont, wielded more influence in the Democratic party and, like General Smith, wrote a his-

tory of Wisconsin territory. Cadwallader C. Washburn, from the state of Maine, and his law and business partner, Cyrus Woodman, were both state leaders, Washburn going to Congress first from Mineral Point, later from La Crosse, and serving as governor of Wisconsin in 1872-74. The Washburn-Woodman sign, faded with age, can still be deciphered over the door of a modest brick office on Mineral Point's High Street.

Mortimer M. Jackson, who came from New York City in 1838, served as attorney-general for the territory, judge of the fifth judicial circuit of the state, and from 1861 as consul at Halifax where his career was noteworthy because of the strategic position of that port during the Civil War. Jackson was a scholarly man, of deeply religious nature, whose influence on Mineral Point society in the formative period was by no means negligible, and through his leadership in educational reform, it affected the larger community as well.

Platteville, a lead district town only second in importance to Mineral Point during the active mining period, had its founder and patriarch in the person of John Hawkins Rountree, a native of Kentucky, who entered the lead region in 1827 from Montgomery County, Illinois. Rountree prospected during the summer of that year and in November began mining on the site of Platteville where his first shelter was a sod shanty soon replaced by a log house. Establishing a battery of log furnaces, he made pig lead out of his ore, opened a store to supply local miners as they came in, sold and gave away building sites on lands he had claimed, and in 1835 platted the town, which always honored him as founder and patron.

Socially Platteville began with a small group of Kentuckians and Illinoisans attracted by the presence

of Rountree, but it soon became cosmopolitan in its population, being differentiated in several respects from Mineral Point. In Platteville was to be found no dominant foreign group to compare with the English in the former city. In 1850 Platteville had 90 English families, a larger number than any other foreign element could show, but the aggregate number of native-American families was 224. There were also 44 German, 22 Irish, 3 Scotch, 7 Canadian, 1 Dutch, and 1 Swiss family. The Americans prevailingly originated in the northeastern states. New York was represented by 41 families, Pennsylvania by 38, Connecticut 12, New Hampshire 8, Massachusetts and Vermont each 7, Maine 6, making a grand total of 119 from those seven states, a majority of all American families. The balance represented Ohio, Maryland, New Jersey, Virginia, Kentucky, Indiana, Illinois, Michigan, North and South Carolina, Georgia, and Missouri. The whole number of families in the town, which embraced the village, was 392 and the total population was 2,180, the village proper not being segregated from the rural portion of the town which, however, had 77 farms representing probably not more than 400 persons. How many of the miners were living outside of the village limits is not known, but the probability is that, as in the case of Mineral Point, the village contained nearly four-fifths of the town's aggregate which would be over 1,600.

Platteville's Yankee lineage was reflected in an unusually keen community interest in religion and education. The founder being a Methodist and connected by marriage with the Samuel Mitchell family of Virginia and Illinois, noted in the annals of pioneer Methodism, it is natural that a church of that faith should have been

established first, and the beginnings of organization are said to have been made at Rountree's house in 1832.[4] A Congregational Church was founded in 1840, and there were also Baptist and Primitive Methodist organizations. Temperance efforts were more successful there than in most of the mining centers, although to be sure there was plenty of drinking, especially on Grocery Street.[5]

Platteville's distinctive institution was the academy. This was founded almost contemporaneously with the Congregational Church and when the church building was erected rooms for the academy were provided on the second floor. The first principal, A. M. Dixon, was of the southern tradition, but in 1846 that post was assumed by a remarkable teacher from the East, Josiah Little Pickard, who was a graduate of Bowdoin College, Maine, though a native of Massachusetts. From the date of Pickard's advent, November, 1846, Platteville Academy assumed prominence as the leading institution of secondary education in the mining country and one of the best in the territory and state. A substantial, commodious stone building was erected within a few years which not only housed the academy comfortably but was later bequeathed to the state's first normal school. The academy exerted a strong influence upon the, as yet, undeveloped public common schools, Pickard assuming the duties of town superintendent in order to promote education locally, and in 1860 being elected to the office of state superintendent of public instruction. In 1864 he became superintendent of the Chicago school

[4]Verne S. Pease, *The Life Story of Major John H. Rountree* (Baraboo, 1928), chap. viii.

[5]Truman O. Douglass, "Platteville in Its First Quarter Century," *Wis. Mag. of Hist.*, vi, 53.

system. His educational career was closed with a significant service as president of the University of Iowa.[6]

Thus Platteville, though an important mining town, with diggings even under some of its principal streets and business houses as well as on the outskirts, represented to the people of southwestern Wisconsin in a peculiar way the cause of advanced education. Academy and normal school graduates came in time to fill the most desirable places in the schools throughout the lead district, while many who attended but a term or two were received with open arms as teachers in the common schools. A Mining Region Teachers' Association, organized in 1848, was one of the incentives for the creation a few years later of the State Teachers' Association. Platteville's population in 1930 was 4,047.

Cassville, located on the Mississippi River in section 20, township 3, range 5 west is one of the historic towns which failed to develop as their founders designed. The site is enticing, a long shelf of plain land, some half a mile wide, bordered inland by picturesque bluffs, the open river in front affording the best steamer landings and a free course to the great markets. The romantic and the utilitarian features seemed there to be in perfect combination. Nevertheless, the place did not thrive. Though settlement began at least as early as 1826,[7] it was a big speculation incident to the organizing of the territory which gave Cassville its first prominence. A group of New York men, the leader of whom was Garret Visscher Denniston, a prominent land speculator,

[6] Josiah L. Pickard, "Experiences of a Wisconsin Educator," *Wis. Mag. of Hist.*, vii, 125-147.

[7] "There are at present only about a dozen log huts [at the 'new town of Cassville']," wrote Dr. John Marsh, January 14, 1827. Lyman, *John Marsh, Pioneer*, 106. He says it was begun as a mining village, though no lead was ever found at that particular spot.

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organized a town-site company, built a grand hotel, and made other improvements, counting on the territorial capital being located at that place as requested by the Rump Council in January, 1836.[8] When the capital went to Madison, the Cassville boom collapsed, and it was not till twenty years later, under the management of Nelson Dewey, that a genuine, permanent revival took place. Then it soon became a village of some 500, doing a large shipping business for an extensive scope of back country. It has, however, always remained a small place.

A statement not very dissimilar to the above can be made in regard to Muscoda, whose career officially begins with the building of a smelting furnace at that point on Wisconsin River (section 8, range 1 west) by William S. Hamilton, in the fall of 1836 or the spring of 1837. Indian traders had operated there for many years previously, probably as early as 1763.[9] At the steamer landing, about where the bridge head now is, a small village gradually grew up which was stimulated in the early 1840's by the removal of the land office from Mineral Point to Muscoda as a feature of the punishment Doty was enabled, through Tyler, to mete out to the Dodge party. But the land business was quiescent during those years, the office migrated back to Mineral Point in 1843, and Muscoda languished. Finally, the coming of the railway in 1856 gave the town a new life though the old Muscoda of the river bank was gradually deserted or moved inland over the "sand prairie" half

[8] What interest William S. Hamilton, president of the Rump Council, who put through the resolution recommending Cassville for capital honors, had in the town-site speculation, is not known. The Denniston House, built of brick at an expense of $30,000, is still used as a hotel.

[9] See the author's article, "Muscoda, 1763-1856," *Wis. Mag. of Hist.*, iv, 27-43.

or three-quarters of a mile, to the vicinity of the railway station. A ferry and later a toll bridge brought across the Wisconsin much farm and forest trade from the adjacent parts of Richland County. Muscoda also became an important shipping and supply station for the neighboring valleys of Blue River and the Fennimore, for Hickory Ridge, and for the prairie farmers beyond the escarpment of the Military Ridge nearly as far south as Platteville. Hogs, cattle, lumber, and grain were the articles of its gross trade, but since 1881 or 1882 Muscoda has been rated as an important cheese market. A public bridge was opened in 1930 for the first time to take the place of the toll bridge originally built by General Jonathan B. Moore to supersede the primitive ferry at that place.

At Tower Hill, on the south bank of the Wisconsin in the town of Wyoming, Iowa County, is a bronze tablet bearing the inscription: "Site of Old Helena, a thriving and important village of lead mining days. Here on July 28, 1832, troops crossed the Wisconsin River in pursuit of Indians under Black Hawk. Among the officers of the army here present, these later became distinguished: Gen. Henry Atkinson, Col. Nathan Boone, Col. Zachary Taylor, Capt. William S. Harney, Col. Hugh Brady, Col. Henry Dodge, Lt. Robert Anderson, Lt. Jefferson Davis, Lt. Albert Sidney Johnston."

The crossing in pursuit of Black Hawk's band had quite another significance for the village than the one celebrated in this permanent inscription. Helena was perhaps the earliest village within the present Iowa County, begun in 1827 or 1828 as a lead-shipping point for Dodge's and other mines but bearing at first the name "Arena."[10] Here flatboats were constructed for

[10] See Chandler's map, 1829, *ante*, op. p. 42.

conveying pig lead to St. Louis, here was a store supplying the mines, and here in 1831 was begun the enterprise which, in the decay of the place, left an enduring historical monument and an enduring name, the "Shot Tower." Yet report says that after the troops crossed the river on that fateful twenty-eighth of July, practically no work of man was left at Helena except the partially completed shot tower, for the logs and planks out of which the houses had been constructed were used to make rafts for transporting the troops over the brimming flood.

The tower was so far completed during the next year that the manufacture of shot is supposed to have begun before its close. Of course a minimum of accessory construction, such as sheds, sorting and polishing houses, and living places for a few workers, had to be provided, but the shot being transported up the river and by way of Green Bay to the East, no revival of the earlier down-river trade took place in consequence. A few years later Buffalo capitalists came into control of the tower, after which shipment was by wagon to Milwaukee and thence by the lakes. Still, for some years, a trade in lumber, floated from the upper Wisconsin, was carried on from Helena to the interior, as the story of the first house in Madison shows.[11] But the coming of the railway with stations at near-by Arena and Spring Green, gave the *coup de grace* to any lingering commercial aspirations Helena may have had, and the closing of the shot tower in 1861 completed the story. Helena, for many years thereafter, was simply the place where one could see the curious remains of the shot-making enterprise. Then, for a period, under the attractive

[11] Roseline Peck, "Beginnings of Madison," *Wis. Hist. Colls.*, vi, 343 ff., especially 357.

leadership of Jenkin Lloyd Jones, it became something of a summer camp and Chautauqua center; and now, under the name of Tower Hill Park, it figures as one of the state's system of public playgrounds. The celebrated architect, Frank Lloyd Wright, has his home and studio at Taliesen near Tower Hill Park.

The county seat of Grant County, Lancaster, was not among the mining towns, but found its support in the agricultural settlements which in the 1840's spread over the fertile open farm lands surrounding it. Lancaster was begun as a county seat speculation in 1837, the site having been purchased from a farming claimant, Aaron Boyce. The prompt construction of the court house, a store, tavern, and some primitive dwellings may be regarded as the initiation of the village. A post office was established in 1838, and the business of the county and of the court attracted a few public officials and lawyers. It was not, however, till farming emigrants began to gather in numbers around the village that much growth was observable and in 1848 the entire town, including the village, had under 1,000 people. But by that time immigration was coming strongly and an analysis of the population census shows that the settlers came largely from the eastern states. For this survey the census of 1850 is not available, the record there being by "districts" instead of towns. But in 1860 the town of Lancaster is treated separately though the village is not segregated from it.

A hand count of the family heads shows they numbered 357. Of these 138 were natives of the states of Pennsylvania, New York, Vermont, Maine, Ohio, Massachusetts, Connecticut, with a few from Maryland, New Jersey, Indiana, and Illinois. Virginia, Kentucky, and Missouri furnished 42, North Carolina, Tennessee,

and South Carolina together 7. Altogether the native-American element numbered 208 family groups or a generous majority of the whole.

Germany furnished the largest number of foreigners, 62 families, as against 41 who were natives of England, 14 Scots, 23 Irish, 3 Welsh, and 1 Canadian. The Germans constituted the only non-English-speaking element, aside from 2 Scandinavians.

Lancaster, like most county seat towns, was noted for its array of legal talent and for the influential character of its newspapers. Among the earliest professional arrivals, after the establishment of the court house there, were J. Allen Barber, a young lawyer from Vermont, and Nelson Dewey, a fledgling attorney from western New York. These men formed a law partnership which terminated after some years, Dewey becoming governor in 1848 and later shifting his base to Cassville. Barber was elected to the National House of Representatives in 1870, serving from 1871 to 1875. George C. Clementson, who was Barber's later law partner, served for many years as judge of the circuit court. These were only the most famous, perhaps, of Lancaster's legal talent. Many other able men practised there, among them Orsamus Cole and Joseph T. Mills.

The most picturesque of her journalists was James M. Goodhue, editor of the *Herald*, who emigrated to St. Paul in 1849 and founded the St. Paul *Pioneer Press*, using the equipment taken from Lancaster which was shipped up the river. On the trip Goodhue printed a prospectus for his proposed new paper, to which he tentatively gave the name *The Epistle of St. Paul.* Why this was abandoned in favor of *Pioneer Press* we do not know, but possibly the editor dreaded a charge of sacri-

lege should he place the Biblical name at the top of the kind of sheet he expected to produce.

But the editor who was most influential politically in the county during the pioneer period was undoubtedly Joseph Carman Cover (pronounced Kōv′er) a Pennsylvanian who made the *Herald* one of the major institutions of the county, who built up its Republicanism, and proved a tower of strength to the national cause during the Civil War. Cover took charge of the *Herald* (begun in 1843) in the year 1851 and continued to publish it till 1877, more than a quarter of a century.[12]

The village, now the city, of Dodgeville, has had a chequered career. Begun soon after the coming of prospectors and miners in the fall of 1827, the most notable of whom was Colonel Henry Dodge, the place was a very active business point till 1829, when the temporary decay of mining caused its virtual abandonment. This was completed in consequence of the Black Hawk War. Thereafter it revived, a post office was established, stores opened, and by gradual steps a village developed which, however, numbered not to exceed 600 by 1850. The competition of Mineral Point was not to be easily sustained and, when the latter place secured its railway connection with the Illinois Central in 1857, Dodgeville's fate seemed to be sealed.

However, in 1860 that village so centrally located in the county succeeded in obtaining the county seat, which helped, and after much tribulation, in 1881, the Dodgeville station of the Northwestern Railway was fixed a mile from the village, giving her people fairly good transportation service. Since that time there has been a steady if not a rapid growth.

[12] "Memoirs of a Pioneer County Editor," *Wis. Mag. of Hist.*, xi, 247-268.

One of the most important population elements at Dodgeville is the Cornish whose coming from about 1840 revived and steadied the production of lead, also stimulating agriculture and manufacturing. Of the latter industry a large wagon, plow, and implement factory was long Dodgeville's chief boast.

The population of the village in 1860 was 1,224. The analysis, made possible by the manuscript census, is most revealing. It appears, for example, that not more than 31 of the 240 family heads were of native birth, all others being technically foreigners. Yet, among the foreign-born majority were 145 English, 47 Welsh, 7 Irish, and 2 Canadians, making an aggregate English-speaking group of 201. There were 4 Norwegians, 3 Germans, and 1 Frenchman. In a word, here was an almost purely English-speaking community which had but a light sprinkling of American inhabitants.

Lafayette, like Iowa County, has had two county seats,[13] one the old mining town of Shullsburg, the other the comparatively new town of Darlington, creation mainly of the Mineral Point Railway. Shullsburg, during the early mining boom which began at Gratiot's Grove and vicinity in 1827, was merely one mining camp among many in that neighborhood. During the early 1840's a village developed there owing to the peculiar richness of its mines and became the municipality of outstanding prominence in the neighborhood. In 1845 it received the post office previously conducted at Gratiot's Grove. The original plat of the village was made and recorded in 1846.

The county business was at first conducted at Avon, near the later Darlington, but by legislative enactment it was transferred to Shullsburg, though it refused to

[13] Assuming Avon to have been virtually identical with Darlington.

stay. Court proceedings, popular votes, and county factions resulted from the contest over the county seat and finally, in 1861, the permanent removal to Darlington was effectuated. A few years later Shullsburg's brick court house was transformed into a central school for that village.

The social geography of the town of Shullsburg in 1860 (for the village was not treated separately) makes a pattern which differs markedly from that which we found at Mineral Point, Dodgeville, or Lancaster. Once again families of foreign derivation are in the ascendant, but here it is the Irish who predominate, Erin contributing 184 of the family heads, as against 147 for England, 10 for Canada, 6 for Scotland, 5 for France, and 25 for Germany. The American contingent totaled only 91, of which New York contributed 22, Pennsylvania 10, Vermont 7, Ohio 10, Kentucky 12, and Virginia 7, the balance being scattered among nine other states. To summarize: there were in the town 468 families. Of these 347 were of Irish, English, Scotch, and Canadian derivation; 25 German, 5 French, and 91 American. We can only assume that proportions in the village were similar. Of course, the aggregate population of the town was much larger than that of the village alone.

The Irish element, which is prominent to the present day, appears to have made its appearance early here, as it did at Galena, Benton, New Diggings, and elsewhere in the same neighborhood. So numerous were the immigrants from Ireland, who were mostly engaged in mining at a point in the immediate vicinity of Shullsburg, that the place came to be called Dublin. Cornish miners began coming a little later, particularly in the 1830's, and during the decade following there arrived

a group of specially skilled miners from the north of England, the great Alston Moor lead fields.[14]

In 1890 Shullsburg's population amounted to 1,800. Having secured a railway in 1881, her transportation problem was solved, while much wealth continued to be extracted from the mines as well as from the fertile fields in the vicinage, giving the little city an important trade and supply function upon which such prosperity as it still enjoys must rest. The census taker in 1930, however, found not more than 1,041 inhabitants in the city.

Darlington, as has been said, is the creation of the Mineral Point Railway, completed to that point on the Pecatonica in 1856. As in the case of Shullsburg, there were aggregations of houses in the vicinity at earlier periods, the place called Avon hard by being chosen as the county seat of Lafayette County when it was first organized in 1848. But, though a post office was established there in 1851, the removal of the court house first to Shullsburg and then to Darlington, and especially the good fortune of the latter place in forming a nodule on the iron ganglion spelled doom for the village of Avon whose little collection of houses promptly dispersed into the open country. Darlington is one of the towns of the lead region which owes much to geography. Located at the point where an important road crossed an important stream promising a valuable water power, this was a choice site for a big flouring mill. Business houses were first set up there in 1850, the mill begun in 1851, and a tavern following in 1852, from which date there was a slow but steady grading up until the rail-

[14] *History of Shullsburg, Wisconsin, 1827-1927*, by Luella Simpson, Josephine Law, and Rebecca Rule. On the Cornish settlers see also Copeland, "The Cornish in Southwest Wisconsin," *Wis. Hist. Colls.*, xiv, 301-334. See also the Chandler map, *ante*, op. p. 42.

road added its impulse when progress became more rapid and assured. Yet, as late as 1865, when the village was chartered, it contained only about 100 inhabitants. The place was incorporated under a city charter in 1877, growth around the mill since the close of the Civil War justifying the step.

Darlington's success, both as a contender for court house honors and for railway and other improvements was due in no small measure to her leading citizen of the period, Hamilton Hunter Gray. That gentleman, a native of New York but a resident of the mining region from his boyhood, became an extensive landholder in the county, an attorney, legislator, and state official; but withal gave to his home town his most devoted efforts. Among other local public services he facilitated the establishment of a central school for Darlington by acquiring an appropriate tract of land and turning it over without profit to the municipality.[15]

Darlington's social constitution differed again from that of the other towns described. At the date of the ninth census, 1870, the "town and village of Darlington," the latter being not yet segregated for statistical purposes, were assigned 529 family heads and 2,833 individual inhabitants. Of the 529 heads, 225 were foreign-born, while 304 were natives of American states, thus practically reversing conditions at Shullsburg, Mineral Point, and Dodgeville, which were mining centers while Darlington was the focus of a somewhat advanced farming community. Among the foreign families 108 were Irish, 76 English, 14 Canadian, 5 Scotch, 13 German, 7 Scandinavian, and 2 Welsh, leaving a total of 205 who were English-speaking as against 20

[15] For a brief biography of Gray see Parker M. Reed, *The Bench and Bar of Wisconsin* (Milwaukee, 1882), 292.

non-English-speaking. The largest native group was the New Yorkers with 107, while Pennsylvania came next with 39, Ohio third 36, Vermont and Wisconsin fourth 26 each. Southerners were decidedly in the minority, though Virginia contributed 4, Kentucky 19, and Missouri 5. Louisiana and Tennessee are credited with 1 each.

Ten years earlier the then town of Center which became Darlington had a total of 347 families of whom 208 were of native and 139 of foreign derivation. The latter group divides into 35 English, 73 Irish, 8 British-American, 4 Scotch, 1 Swiss, 16 German, and 2 Scandinavian families. No doubt the increase in number of families by 1870 corresponds roughly to the growth of the village in the same period. It is noteworthy that during the war decade, 1860-70, the English contingent more than doubled while the Irish increased only 70 per cent and the German actually declined. The increase in American families was less proportionally than the aggregate increase.

There are numerous other towns and villages in the lead counties, some of which like Potosi, Hazel Green, Highland, Fair Play, Mifflin, New Diggings, Beetown, Belmont, and Benton have a mining history of considerable interest. Others again, such as Boscobel, Fennimore, Montfort, Rewey, Calamine, Avoca are the results mainly of railway construction. Besides, there are neighborhood trading centers where advanced schools, churches, and other social institutions developed much as in the more important places to the infinite advantage of the surrounding rural populations. For example, the academy at Mt. Hope, and the free high schools at Boscobel and at Bloomington, to the author's personal knowledge, filled important places in the educational

history of the western portion of Grant County for many years, and these cases are merely typical.

The foregoing justifies the remark with which this chapter begins, namely: that this one-time mining and later farming country has always been preëminently rural in character. Nevertheless, a certain amount of manufacturing, determined mainly by local market conditions, has existed from pioneer times. Not only sawmills and gristmills, but woolen mills, plow factories, wagon and carriage factories, furniture and stave factories, were so distributed as to supply reasonably well the needs of the inhabitants of these counties.

A powder manufactory was for many years a feature of Platteville's industry, and this concern sought a market beyond the boundaries of the lead region as well as within them.

CHAPTER XIV

POPULATION CHANGES

THE most arresting, as well as socially important feature of population growth in a given neighborhood, is the rate at which foreign-born persons intermingle with the native stocks. Any traveler through the lead counties can find districts large or small in which the present farm population is obviously descended in large part from English, Irish, Welsh, German, Scandinavian, or Bohemian immigrants, and the question why these areas differ in that respect, and also from others almost wholly occupied by descendants of pioneer American settlers, calls for a rational explanation.

The norm for determining such population changes as have occurred is, of course, the earliest census record for each town or district, and since the census of 1850 came a trifle early for portions of these counties, we shall refer in some cases to that of 1860.

Taking the counties as units, there were, in 1850, natives and foreign-born as follows: Grant County had a total population of 16,171, of whom 12,048, or three-fourths, were of American nativity and of the balance, 4,123, there were 2,000 English and 900 Germans. The remainder were Irish, Welsh, French, and scattering. Iowa County showed a small majority of natives, 4,977 out of the aggregate 9,528, and here again the English, 2,639 persons, together with 568 Welsh made the chief contribution to the foreign minority. In Lafayette

County the foreign contribution amounted to 4,623 out of a total population of 11,531, and there the Irish were a close second to the English, the figures being 2,010 and 1,840 respectively. All other foreign-born numbered only 773.

From the above it is clear that, as stated in previous chapters, the lead region was an English-speaking community with only minor foreign language admixtures, and that the English in each county was the dominant non-native element.

When we analyze this result, however, taking the towns instead of the counties as a basis, the local grouping of the foreign-born is seen to make a pattern which outlines, in strong colors, the distinctively mining districts. The distribution of the dominant British element clearly was determined by the occupation of lead mining, as witness the leadership of that racial group in Mineral Point, Dodgeville, Linden, Ridgeway, Benton, Elk Grove, Monticello, White Oak Springs, Hazel Green, and Platteville. If, for the descriptive noun "English," we substitute "Cornish," their relationship to the mining industry is explained; for while some came from other parts of England, the majority were from the vicinity of Lands End, and were miners by tradition. In a few of the mining districts having large foreign admixtures some other group was more prominent than the English—for example, the Irish in New Diggings, Shullsburg, Highland, and the Germans in Potosi. But in each of the exceptional cases the difference in number between the British and the leading element was slight and the former never fell below second place.

Outside of the mining districts only nine towns showed foreign contingents in 1850 or 1860 in a proportion to the American of not less than one to two. These

were Cassville, Castle Rock, Glen Haven, and Liberty in Grant County; Arena and Moscow in Iowa; Argyle, Blanchard, and Seymour in Lafayette. In only one of these nine towns, Arena, were the English in the lead and there it was not Cornish miners but factory operatives who constituted the bulk of the English settlers. In other words, it was an English colony, the beginnings of which go back to 1842 when a group of Liverpool mechanics organized the British Temperance Emigration Society, elaborated a constitution, and made plans to begin a settlement in the United States. A fund for the purchase of land was raised by the method of small weekly assessments.

Toward the end of the year 1843 the agents of this society reached Madison and making their way west to a point in the Black Earth valley where the town of Mazomanie now stands, selected lands in that still untouched region for the emigrants who were soon to follow. There arrived, in the period 1844 to 1849, a total of 610 persons, who spread over several townships in Dane County and also Arena in Iowa. While not all of them took lands under the society's auspices, it is probable that nearly all were of the type the society brought over and from the same locality.[1]

In Cassville and Glen Haven, Grant County, the leading foreign element in 1860 was the German, of whom there were 370 as against a British group composed of 128 English, 16 Scots, and 72 British-Americans. The Irish, third in number, had only 60 representatives, and the Scandinavians amounted to 3. Since there was some mining in Glen Haven, it is interesting

[1] William Kittle, *History of the Township and Village of Mazomanie* (Madison, 1900), and the British Temperance Emigration Society Papers, Wisconsin Historical Library.

to see how far the dominant Germans were engaged in it and a hand count of the occupations assigned to the German-born in 1860 shows just 1 who is called a miner, and 1 who is called a smelter. In Cassville 10 were merchants, 7 carpenters, 5 shoemakers, 3 each stonemasons, blacksmiths, cabinetmakers, and tailors, and 2 each wagon makers, tinners, and bricklayers. A butcher, cooper, taverner, physician, teamster, clerk, and clock maker complete the tale. In Glen Haven the Germans were nearly all farmers and farm laborers, the first group numbering 66, the second 24.

The Germans of those two contiguous towns evidently constituted an important settlement, but the fact that they came from many different German states militates against the hypothesis of deliberate colonization. We have here rather an example of diffusion from a larger center, for it is known that many of them came up the river from St. Louis in search of business opportunities, and of land so located as to be near water transportation. Others had been at Belleville, Illinois, where lived Frederick Hecker, a famous Baden revolutionist of 1848, still others had been for a time at Galena, Dubuque, Guttenberg (Iowa), or other points on the river. The Mississippi had allured the immigrants and these neighborhoods proffered them land and business chances when they were wanted.[2]

Liberty, rough in surface characteristics like the others, is the third Grant County town outside the lead region which had a strong foreign contingent and there also the Germans were in the lead. By 1860 they were present to the number of 150 persons, while England with the aid of Scotland, Wales, and British-America

[2] See biographies of pioneer Germans of these towns in *History of Grant County, Wisconsin* (Western Historical Company, Chicago, 1881).

mustered but 49 and Ireland only 35. In 1870 there were 222 Germans, to 35 British and 26 Irish, showing that the town was taking on a distinctly Teutonic complexion, although by that time the native-born, including many children of Germans, numbered 614. As in the other cases discussed, the Germans appear to have been attracted by the cheap lands of the town and there is no evidence of a colonizing movement. At least 45 were farmers in 1860 and only half a dozen followed other callings.

Potosi seems to be the mining town which, with the familiar strong admixture of foreigners, had substituted Germans in place of the usually dominant English or the occasionally dominant Irish. The respective numbers, in 1860, were Germans 460, British (including Canadians) 316, Irish 101. All foreign-born numbered 900, all native-born 1,181. The community was on the decline, the census taker recording at the close of his count the statement: "The village has not increased in population from the fact of its being a mining district, the gold discoveries in the different localities has caused a drain in its population that overbalances its increase." A hand count of the occupations pursued by the Germans shows there were 5 stonemasons, 3 brewers, 3 clerks, blacksmiths, cabinetmakers, and the same number of farmers; there were 2 each of miners, bakers, and wagon makers, while 1 each represents the coopers, laborers, merchants, shop keepers, tinners, glass blowers, and shoemakers.

A surprise awaits us when we count the occupations of the Germans outside the village: for we find among them *83 lead miners*, 60 farmers, and 17 farm laborers. There are also 11 shoemakers, 4 carpenters, 3 each of tailors, brewers, and laborers, 2 stonemasons, 2 school-

teachers, 2 blacksmiths, 2 shop keepers, 1 each of wood-choppers, ferrymen, wagon makers, clerks, butchers, and painters. "The township," says the census taker, "as well as the village, has suffered from an excessive emigration to the gold mines, and the new territories of Kansas and Nebraska."

The Germans of Potosi town and village were of Bavarian, Prussian, Hanoverian, and Württemberg derivation—with a few scattering. The larger number was "Prussians" but inasmuch as the community was prevailingly Catholic this probably meant in many cases natives of the Rhineland. The pioneer of the German immigration was Celestine Kaltenbach who arrived in the region in 1832 and promptly betook himself to lead mining. Since German Catholics under the leadership of Father Fusch, established a church at Dutch Hollow (now Tennyson) in 1845, the emigration was probably strong by that time. It was, however, an individual movement, partly illustrated by the letters of Rhineland Germans preserved in the State Historical Library.

In the four counties along the shore of Lake Michigan, from the Illinois line north for seventy-two miles, we found the Yankees beforehand in absorbing the open lands of Kenosha and Racine counties. Accordingly, when the Germans began coming, since they were bound to settle near the lake, in order to have accessible market facilities, they passed northward from Milwaukee and took up heavily wooded land.[3] Doubtless, as previously suggested, the desire to locate near the commercial highway of the Mississippi was one of the motives determining German settlement among the hills in this region just as it had dictated similar settlements among the

[3] Schafer, *Four Wisconsin Counties*, chap. v.

hills along the Missouri, above St. Louis.[4] It may be stated, once for all, that the German pioneers in the lead region secured comparatively little of the smooth prairie lands, of first quality, these being usually in the hands of earlier prospectors. But much of that kind of land was acquired by Germans later.

In Potosi, as in Augusta, Hermann, and other points along the Missouri littoral, the Rhineland Germans laid out vineyards and at one time made a good beginning in producing Wisconsin wine. In the year 1879, for example, one producer was credited with 3,000 gallons and numerous others made smaller amounts. Possibly, the promise of the grape on favorable exposures was one of the allurements attracting settlement from the Rhineland.

The mining activity of Germans in Potosi, which is somewhat unusual, may be explained under the head of profitable employment. The mines in Dutch Hollow and elsewhere in the town were shallow diggings. The outpouring to California in 1849 and the years following had been extraordinary even for the lead-mining region, producing such depression in prices that properties could be picked up for a song. This constituted a major attraction to German immigrants, who were ready to labor at almost anything which insured reasonable rewards. Farming could be taken up later.

It goes without saying that the native Americans, as late as 1860, were sharply divided politically between the Republican and Democratic parties, with the former, however, in the lead throughout most of Grant County. Wherever northeastern Americans made up a large majority of the voters, the Lincoln electors were

[4] See Schurz's account of Augusta, Missouri, in Joseph Schafer, *Intimate Letters of Carl Schurz, 1841-1869* (Madison, 1928), 380-383.

virtually certain of the majority. It was otherwise where Southwesterners, or certain types of foreign-born were concentrated and particularly in communities made up largely of Irish and Catholic Germans who went Democratic with approximate unanimity.[5] Potosi is a good example. It was one of three towns that favored Douglas in 1860, Blue River (the later Castle Rock), and Wingville being the other two, whereas the remaining twenty-six towns all contributed to the heavy majority Grant County gave Lincoln. The foreign-born family heads in Potosi numbered 326 and the Germans (mostly Catholic) and Irish made up probably two-thirds of that number or, say, 201, while the British were about one-third or 109. The American contingent showed 76 family heads. The vote stood 255 for Lincoln and 266 for Douglas: a result which was easily within the power of the German-Irish combination. In Cassville, Glen Haven, Fennimore and other towns harboring considerable numbers of Germans but few Irish, the result was different.

In Blue River (Castle Rock) the foreign-born heads of families—Bohemian, German, Irish, British, and Scandinavian—almost doubled the number of American heads. The Bohemians, Irish, and Germans—predominantly Catholic—outnumbered the English, Scandinavians, and native Americans, and it would seem that many of the Bohemians here, unlike those in Racine County, voted the Democratic ticket. Possibly they were not subject to the influence of the Bohemian newspaper, *Slavie*, published at Racine, which in that neighborhood made Republicans of most Bohemians.[6]

The defection of Wingville from the Republican

[5] Schafer, *Four Wisconsin Counties*, chap. viii.

[6] *Ibid.*

band-wagon cannot be accounted for on the ground of the foreign-born voters. The town had nearly twice as many native family heads as foreign and, while the English (including Scotch and Canadians) was the dominant foreign element, it was neutralized for voting purposes by the combined German and Irish contingents. So the Americans were left to decide the contest and of these the majority consisted of natives of Virginia, Pennsylvania, and Missouri.[7]

Passing now to Iowa County we remind ourselves that foreign-born populations were concentrated in Arena, Dodgeville, Highland, Linden, Mineral Point, Moscow, and Ridgeway, seven towns, of which five are mining districts. In the latter the English dominate in four, first place in Highland being taken by the Irish. Arena, as we saw, had received an English agricultural colony along with Mazomanie and other towns located mainly in Dane County. This leaves the town of Moscow to be explained. Here the Scandinavians (Norwegians) were in a great majority among foreign-born. At all events, in 1870, where separate statistics for that town begin, there were 367 Scandinavians as against 86 of all other derivations except American; and since the foreign-born heads of families were in the proportion of 142 to 18 American, it can be seen that the town was overwhelmingly Scandinavian. These people were farmers, having taken the comparatively rough lands near the head of the Pecatonica, as the best available at the times of their coming, the fine prairie lands of Dane County having already been occupied, largely by their

[7] The various states were the birthplaces of 63 of whom 11 were Virginians, 6 Illinoisans, 19 Ohioans, 17 Pennsylvanians, 4 Kentuckians, and 6 Missourians. Ten were from New York, 3 from Indiana, 2 each from Massachusetts, New Jersey, and Vermont, and 1 each from Wisconsin, North Carolina, and Connecticut.

countrymen, and the finest of Iowa and Lafayette County prairies being also absorbed by earlier settlers. The suspicion that many of the Norwegians certified by the census taker as living in Moscow in 1870 may have arrived within that decade, is strengthened by the town's vote in 1860, which stood, Lincoln 38, Douglas 73. This Democratic majority is wholly incompatible with the theory of Norwegian dominance, and it looks as if the early Irish settlers had been still in control at that time. Waldwick, from which Moscow's territory was severed early in 1860, gave a majority for Lincoln.

We have set down Highland as one of the mining towns having a strong foreign-born element, among whom, in 1850, the Irish had a plurality. Many of the Irish pioneers, some of whom were farmers, others miners, had entered the county as laborers, helping to construct the Wisconsin valley section of the Milwaukee and Mississippi Railroad. Finding when that work was done that government land could be had a few miles inland from the railway, and also remunerative work in the mines, they concentrated in the town of Highland, and the adjacent eastern portion of the town of Castle Rock, where their descendants are still to be found.[8] By 1860 the plurality had passed to the Germans, though the Irish continued strong, as did also the British, and the Scandinavians. The two latter numbered, respectively, 247 and 208, while the Irish mustered 270 and the Germans 332. Swiss, Poles, and Bohemians added up to 21. The native-American family heads, 85, were not quite one-fourth of the foreign total, 353. These conditions are reflected in the vote, Lincoln receiving 114, Douglas 343. The mining towns in which

[8] See Joseph Schafer, *Wisconsin Domesday Book, Town Studies I* (Madison, 1924), towns of Highland and Castle Rock.

the British element was in control all registered generous majorities for Lincoln, as did Arena which had the English colony.

We have selected, out of Lafayette County's fifteen towns, nine in which the foreign-born were so concentrated as to appear to the American-born in 1850 in a proportion of not less than one to two. A word should be added here to explain the divergence between the proportions of native and foreign-born individuals and native and foreign-born family heads. There were only two towns in Lafayette—Benton and New Diggings—in which the foreign population exceeded the native population. But in four of them the foreign family heads exceeded in number the American family heads, viz: Benton, New Diggings, Elk Grove, and Shullsburg while in Monticello the numbers were equal. The discrepancy arises from the fact that American heads represent families which are native throughout, while foreign heads have under them a larger or smaller number of native-born children. This discrepancy, moreover, becomes more marked the longer the foreign families have been American residents, in many instances the census showing only the husband and wife, or even the husband alone, as foreign-born, while the entire roll of their children is native to the country and often (especially in these relatively old counties) to the state of Wisconsin.

Family influence being what it is, it follows that a count of family heads is ordinarily a better test of the social complexion of a community than a count of the nativities of individuals. In other words, a town in which a plurality of the families have English heads, can properly be described as an English community, and similarly where other elements predominate strongly.

On that principle the twenty-nine towns of Grant County in 1860 would divide into nineteen which were prevailingly American and ten prevailingly foreign. Of the latter five—Cassville, Glen Haven, Jamestown, Liberty, and Potosi—would be classed as German communities; Hazel Green, Little Grant, Smelser, and Platteville as English; Blue River (or Castle Rock), as Bohemian. Among the towns reckoned in the American list, Muscoda became Bohemian by 1870; Hickory Grove, Scandinavian, and Paris, German.[9]

The distribution of the German towns was apparently controlled by the Mississippi, since they formed a belt along that river from the south boundary of Jamestown, the Illinois line, to the south boundary of Bloomington, with a single break of six miles where the town of Waterloo chinks in between Potosi and Cassville. And, in fact, Waterloo had more families of German origin than of any other foreign stock, though the Americans were dominant there and so remained. Germans had also filtered generously into adjacent towns like Platteville, Harrison, Lancaster, Ellenboro, and Fennimore, and they dominated, as we have seen, in Liberty. They seem to have followed up both branches of Platte River but did not ascend Grant River numerously, save along its western affluent reaching into the town of Glen Haven.

In Iowa County Germans were relatively less numerous; still by 1860, they had a plurality over all others in Highland, and among the foreign elements in Pulaski, and probably in Eden. Considerable numbers of them were found in Waldwick, Ridgeway, Mineral

[9] The 1850 population census is not available for this county because most of the existing towns were grouped in "districts," not treated separately.

Point, Dodgeville, Mifflin, and Arena. Lafayette County, in 1860, had an aggregate of 486 Germans and in no town did they constitute a large fraction of the foreign-born, who were prevailingly of English, Irish, or Scandinavian stocks. As against the above total for Lafayette, Iowa County had 924 Germans and Grant 2,768. By contrast, Lafayette had 503 Scandinavians, 421 of whom were in the two contiguous towns of Argyle, and Wiota; Iowa had 891, of whom 733 were in the four towns of Dodgeville, Ridgeway, Highland, and Waldwick.[10]

Grant County had a total of 164 Scandinavians distributed among eighteen of her then twenty-nine towns, half of them being in the two contiguous towns of Fennimore and Hickory Grove. Castle Rock, Wingville, and Clifton, forming with the two mentioned above a block of five towns, mostly in the rough part of the county, had appreciable numbers also.

It is clear, from the records of land entries, that Germans, Scandinavians, and Bohemians were recent arrivals in 1860. While the first two of these groups had been entering the state since the last year of the fourth decade, and many had bought land in the Milwaukee land district prior to 1850, their drift into the Mineral Point land district was only well begun at that date.[11] No German, it is believed, bought government land at Mineral Point prior to 1844, and only a few scattering ones did so before 1847, most of the earliest

[10] Moscow severed from Waldwick in 1860, had 367 in 1870 while the present town of Waldwick had but 35. They increased largely in that decade elsewhere also. Our statistics for Eden as a distinct entity begin only in 1885. At that time there were 124 Germans and only 121 other foreigners.

[11] For the later distribution of Germans in Wisconsin see Guy-Harold Smith's map, *Wis. Mag. of Hist.*, xiii, op. p. 112. The same author has a map of the Scandinavian dissemination in xiv, op. p. 420.

entries being in Sauk County. Norwegians, however, selected locations in Dane County, especially the town of Pleasant Springs, beginning in 1845, though most of the purchases there fell between the dates 1848 and 1860. Norwegians and Germans were strictly contemporaneous, but they had distinctive objectives and at first mingled little in the same areas. The Bohemians came mainly after 1860, though 96 were reported in Castle Rock in that year, also 20 in Muscoda, and a few in other Grant County towns. There were several families in Pulaski and Highland, in Iowa County adjacent to Muscoda and Castle Rock, but none whatever in Lafayette; so that element was sharply localized.[12]

In order to ascertain the capability of these newer foreign groups to compete with Americans, it will be useful to obtain a view of their economic condition, about which the census yields useful data. A preliminary word about the Germans would be that most of their immigrants were either of the actual landholding peasantry or of the urban craftsmen who were generally affiliated with the peasant class. In addition, a limited number of well established business men, well-to-do farmers, and professional men entered into the steadily growing emigration to America and there was also—as is well known—a certain limited number of political refugees, especially the forty-eighters.[13]

[12] The distribution of Bohemians in Wisconsin in 1861-62 can be determined approximately. The great center was still Racine County where the pioneer settlements were made about 1855. Other places having considerable numbers were Milwaukee, Manitowoc, Kewaunee, Francis Creek, Two Rivers, Watertown, Muscoda, and Castle Rock, Highland, Yuba in Richland County, Prairie du Chien, and La Crosse. Data derived from *Slavie* by Professor Cyril M. Jansky.

[13] Since the paragraph was written, a careful study of the backgrounds of German emigration by Marcus L. Hansen has been published under the title *The Revolutions of 1848 and German Emigration* (Pamphlet reprint from *Journal of Economic and Business History*, vol. ii, no. 4, August, 1930).

It goes without saying that most of the immigrants were either young unattached men or couples recently married, and that the amounts of ready money brought over, while considerable in the aggregate, were in most instances all but negligible. The case of Jacob Baumgartner was typical. He had learned his trade, practised it as journeyman in the old country, and came to America with but a few dollars beyond the cost of the voyage and the western journey. Those who disposed of property in the old home prior to emigrating, sometimes had money enough to buy an inexpensive farm, or some village or town business, but the majority had their fortunes to make after reaching America, and their ways of doing it were as various as the opportunities for satisfactory employment found here.

These points are illustrated in the cases of the Germans of Potosi and Cassville. We noted that in 1860 the former town had a total of 460 natives of various German states, the latter 217. Now, the population census in that year shows first of all that within the 25 German families at Potosi village were 122 persons though only 60 are reckoned as Germans since the great majority of the children were American-born. This anachronism runs all through the census statistics of population and must be kept clearly in mind. Potosi town had a definitely German complexion, yet the record stands: American natives, 1,181; all foreigners, 900. It is a rare case when the aggregate of individuals in a given foreign group is more than three times the total of the families of the same group, while one would have to divide the American contingent by 8 or 9 in order to approximate the number of families represented. For example, the 900 foreigners in Potosi are comprehended in 326 families or 2.76 persons to the

family; while the 1,181 natives account for only 76 families or at the rate of nearly 16 to the family. Of course "family" is here used purely in a statistical sense.

The economic condition of Potosi Germans in 1860 is partly indicated in the fact that the number of properties (real and personal combined) which attain to or exceed $1,000 was only 31, of which 6 were in the village and 25 in the town. On the other hand, the number of the property-less, bringing under that designation all those who had realty and personalty to a value of not more than $100, was 4 in the village and 23 in the town.

There was in the village one merchant, Celestine Kaltenbach, who was rated at $9,000, $3,000 realty and $6,000 personalty. He was the wealthiest German in either village or town and he had been in Potosi since the year of the Black Hawk War. A farmer named Henry Uppenauer estimated his farm worth $4,000 and personal property $600, another farmer valued his entire property at $2,500, and one miner—the richest in his class—reported $2,000 in real estate and $430 personalty. Potosi was not an opulent or notably prosperous community, yet the village had at least one merchant rated at $22,000, while there were in the town American, English, and Irish farmers whose properties were described in five figures, aside from a goodly number of rather high four-figure values.

On the whole, though there were poor people also among the other groups, a comparison shows that, as a body, the Germans were still struggling to obtain a foothold on the slippery rungs of the ladder leading to material independence. The large proportion of miners among them means, practically, that many had to dig for a living. A number of those described as farmers had no real estate and were doubtless renters, while

some were working as farm laborers, in part for German farmers, in part for American. Here is the process of economic emancipation dynamically in operation—common labor for others exclusively in order to assemble working equipment, labor for self on properties owned by others, finally ownership of land. If so many Germans in Potosi had not found profitable work at mining, the count of farm laborers and tenant farmers would doubtless have been much higher.

The testimony of the census is conclusive as to the comparative length of the period during which the Potosi Germans had resided in Wisconsin and also as to their movements in America prior to their arrival in Wisconsin. This results from the records of birthplaces of the children. Among the 25 German families in the village of Potosi 5 were childless couples, 2 had children born in the old country and others born in America, while 1 had German-born children exclusively. One had 2 young children, both natives of Pennsylvania; 2 in another large family were natives of Illinois. One father had an only son, born in Württemberg. The balance, 14, had Wisconsin-born children exclusively, and the first-born of these ranged from seventeen years to two years.

Aside from the reported families with their foreign-born and native children, the village had 4 single men of 30 and under, 1 a lead miner, 2 clerks, and 1 clergyman of the Reformed Church. There were also 3 young women domestics.

If, now, we allow twenty years to pass over the Potosi community and then take another look at its rural folk we shall find: First, that out of the town's 189 farms, 108 were in the hands of Germans and 81 of non-Germans. Second, that the German-owned

farms were valued at $161,900 or an average of $1,500 per farm, the non-German farms at $145,725 or at the rate of $1,800 per farm. The difference was due to the presence in the German list of a larger proportion of small cheap farms, although the proportion of respectable farms, worth $2,000 and over, was larger among the Germans than among the non-Germans.[14] The higher average age of non-German farms doubtless affected the result. The upper limit of value of Potosi farms in 1880 was $6,000, in which class there were 3, 2 of them owned by non-Germans, 1 by a German. Farms valued at $1,000 or less numbered 53 and of these Germans owned the lion's share, 35.

Another and better test of the condition of the Germans absolutely and relatively is to compare their total farm incomes with those of the non-Germans. For this canvass we have included not only the "town of Potosi" so-called, but also British Hollow which technically falls within the town. In a number of instances no incomes are recorded due doubtless to the occupants being new in 1879. But such records are available for 261 farms of which 124 appear to be owned by Germans, 137 by non-Germans. The summary is as follows: 124 German farmers produced in 1879 an aggregate combined farm income of $74,872; 137 non-Germans produced the same year an aggregate combined farm income of $78,892. The Germans, accordingly, averaged $604 per farm, the non-Germans, $575.

Unlike the Germans whose course as immigrants was directed by the Mississippi, the Scandinavians in these counties represent a process of expansion west-

[14] Germans had 53 such farms, non-Germans 37. We have excluded the British Hollow district containing 88 farms and have considered only those scheduled under Potosi proper.

ward from districts occupied early about Lake Koshkonong and Rock Prairie. The area of Scandinavian concentration in Wisconsin by 1860 describes a belt reaching from Koshkonong to Wiota. It includes the towns of Christiana, Pleasant Springs, Dunkirk, Oregon, Montrose, Primrose, and Perry in Dane County; Brigham (Ridgeway), and Moscow in Iowa; Argyle, and Wiota in Lafayette, with parts of other towns adjacent to all those named. In another ten years they had spread over a great deal of additional territory, becoming especially important in the north-slope towns both of Iowa and Grant counties, but gaining only the most precarious footing on the Mississippi River front. The prairie farming towns of Lafayette County also received them in appreciable numbers, as did the towns and cities which were on or near their line of march.

Between the sloop[15] sailing in the summer of 1825 and the census year 1860, a full generation had passed, and during that interval Norwegian settlements had spread over the country from Orleans County, New York, to and beyond the Mississippi. Illinois, Wisconsin, Minnesota, and Iowa being peculiarly open, were penetrated by them more effectually than other states.

In the aggregate, the Norwegian and Swedish immigration, from 1820 to 1860, amounted for the whole country to only 43,995, while in the same period the English immigration totaled 302,665, the Irish 967,366, the German 1,486,044. Even little Switzerland sent to America nearly as many settlers as did Norway and

[15] The sloop *Restaurationen*, 45 tons, sailed from Stavanger with 52 Norwegian Quakers, July 4, 1825, and landed in New York, October 9. These pioneers are often spoken of as the "Sloopers." They settled first in Orleans County, New York. George T. Flom, *A History of Norwegian Immigration to the United States* (Iowa City, 1909), chap. iv.

Sweden.[16] But the "Northmen" were concentrating so strongly in Wisconsin that, in 1850, she had 8,885 persons of that stock while the entire nation harbored only 12,678; and even in 1860 Wisconsin's 21,442 Norwegians were nearly one-half of the country's total. At that time Minnesota stood second, with 8,425; Iowa third, 5,688; and Illinois fourth, with 4,891.

While the Norwegians tested out also the capabilities of more southerly states, such as Missouri and Texas, they preferred the North, absorbing the government-owned lightly timbered and prairie lands with peculiar avidity. These types of land were found abundantly in Wisconsin and her three neighbor states named above, which fact, aside from climate, explains the Norwegian's partiality for those states. The attraction of the land was quite as strong among these people as it was among the Germans.

On the analogy of Sweden, it may be assumed that the Norwegian immigrants, after the first few years, were nearly all either peasants or landsmen of a status inferior to the freeholding peasants.[17] The obtaining of land in fairly liberal amounts for farming was the grand passion of such immigrants whether Scandinavian, German, or Bohemian, but the Norwegian displayed a more settled determination than did his immigrant contemporaries to secure land which could be made into farms without the arduous labor of grubbing and clearing away a heavy growth of timber. Possibly the difference should be stated in other terms. The Germans showed timidity or conservatism (whichever

[16] According to one of the census tables Switzerland was ahead of Norway and Sweden. But that table curiously enough assigns to the north countries only 36,129.

[17] Cf. John S. Lindberg, *The Background of Swedish Emigration to the United States* (University of Minnesota Press, Minneapolis, 1930).

term is preferred) about launching into the interior, and insisted first upon settling near the ports on Lake Michigan, and then near the Mississippi River. They, also, prized the open lands and took them wherever they could be found in the proper localities. But to them the localities were determined by market considerations. So the Germans virtually filled up Milwaukee and Ozaukee counties, stretching north also through Sheboygan and Manitowoc, before effecting much expansion westward; and the Bohemians for a number of years also clung to the lake shore in northeastern Racine County. The Norwegians seemed more disposed to risk themselves anywhere in the neighborhood of an American settlement which would supply work for those who needed it, would guarantee the fundamental social services of merchants and craftsmen, and, with themselves, would be the means of establishing roads, railways, schools, and other improvements on which progress depends.

To obtain these guarantees they were willing, if necessary, to take lands not of first quality, as in the towns of Whitewater, Primrose, Moscow, Arena, Wingville, Castle Rock, and Fennimore, if the better tracts had already been picked by Americans or others. But in not a few instances, as on Rock Prairie, also the towns of Albion, Pleasant Springs, and other localities in Dane County, they obtained some of the fattest and finest prairie land of southern Wisconsin, and were soon flourishing as cultivators of the soil.[18]

[18] In Pleasant Springs, Dane County, according to the 1860 census, 46 farms owned by Norwegians were valued at $2,531 on the average, and the same farms had produced an average of 482 bushels of wheat. In that town Norwegian names were attached to 121 farms in 1880, while in 1925, according to the atlas of land owners, 108 Norwegians or descendants of Norwegians monopolized all but about a dozen of the farms of the town. No similar trend occurred in Wiota, Castle Rock, Hickory Grove, or Fen-

Like the Germans, the Scandinavians seized with eagerness every opportunity to get forward in the New World. Needing ready money to buy land and begin farming, they worked as farm hands for Americans, performed seasonal labor in harvest, threshing, or hay making, and looked keenly after jobs in the towns and villages. In towns like Madison, a majority of the domestics during a few years about the middle of the century were Norwegian or Swedish girls. Says a Norse visitor of 1847-48, "I believe there is not a single house of any size at all in Madison where Norwegians are not found."[19] In Lafayette County many Scandinavians were miners during their first period, just as were the Germans in Potosi.[20]

Some light on the economic status of the Norwegians in 1860 is gained from a comparative study of the farming community in Wiota, Lafayette County. The farms of that town, numbering 137, were assigned by the census the aggregate value of $218,510 which is at the average rate of nearly $1,600 per farm. Among them were 36 farms owned by Norwegians and these averaged only $1,056 in value. There were also 29 Norwegian farm laborers who had real estate in only five cases and this amounted to $100, $200, $300, and $500, which may represent either investments in land or in houses. The five referred to and fifteen others owned personal property ranging in value from $20 to $500. Evidently they

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nimore, showing that the Norwegians emigrated more freely from the poorer towns, going as soon as possible to localities like the Minnesota and Dakota prairies where better lands could be had.

[19] Ole Munch Ræder, *America in the Forties* (Minneapolis, 1929), 38. Like most summaries of the kind this statement is too sweeping. In 1850 there were, indeed, 35 Norwegian women and girls serving in Madison households and hotels, but there were also 13 Irish and 17 Germans serving in similar ways. About a dozen Norwegian men were employed as stable boys, gardeners, etc.

[20] C. M. Tuttle diary, MS Wisconsin Historical Library.

were saving against the great day when the hoped for farm might be bought.

Among the Norwegian farm owners those who had entered government land were about one-half of the whole number, the rest having purchased from private holders. But it was not generally even the best land in that district of light soil. This fact comes out strikingly in a study of the 1880 agricultural census. At that time there were 77 farms owned by Norwegians and just twice that number, 154, by others. The Norwegian farms were valued at $148,600, or an average of $1,930. The non-Norwegian farms showed an average valuation of $3,228. In other words, the average Norwegian farmer had real estate worth only 60 per cent of his neighbor's farm. The average income of the Norwegian farms was $321, while that of the balance of the farmers was $499. The relation this time is represented mathematically by .64 to 1. The incomes of the second class of farmers were low, that of the Norwegians distinctly lower. They were the poorer farmers in an indifferent farming town.

In Moscow, Iowa County, a study of the 1880 census of agriculture yields a similar but less striking result. In that town the majority of the farms, 79, was owned by Norwegians the non-Norwegians owning only 58. But the Norwegian farms had an average valuation of $1,354, the others $1,832. Nevertheless, in average income the Norwegians fell only $60 below their neighbors, theirs being a trifle under $407 per farm, the others $468 per farm. Evidently, the Norwegians entered that town early enough to secure as good land as other settlers, but the excessive number of very small farms credited to them brought down the average valuation.

Most of the Bohemians in the town of Castle Rock, Grant County, bought their lands after 1860, a few before. This was late, most of the better tracts having already passed into private hands and the choicest bottom and smoothest plateau lands being comprehended in well established farms. These people, accordingly, were obliged either to take left-over speculator land, a few remaining tracts of government land—usually very rough—or buy the farms that were for sale by earlier settlers which naturally were not often the good ones.

The results are reflected in the record of farm values and farm productions of this town in the census of 1880. There were 112 farms, of which 61 were owned by Bohemians, 51 by non-Bohemians. The former were assigned valuations which averaged $990 per farm, and incomes in the previous year which would amount to $379 per farm. The other group averaged $1,923 in valuation and $556 in income. Seven Norwegian-owned farms showed $1,094 valuation and $330 income; and 13 Irish-owned farms had an average valuation of $2,346, an average income of $707.

This analysis for Castle Rock is especially interesting for the light it throws on the influence of the time relation in settlement. The early comers, who were the Irish, a few Americans and some Germans, took the pick of the land in the bottoms and on the broad, flat ridges—in both situations practically prairie or oak-openings. Those better farms carried valuations ranging from $2,500 to $8,000, and showed incomes of $700 to $1,500. The Bohemians and Norwegians entered that town, mainly in the sixties and seventies, because the left-over wild lands were cheap, and some of the poorer farms were for sale at low prices. On those cheap lands they were able to live, but many of them eked out by

BROAD, FERTILE VALLEY, BORDERED WITH HEAVILY WOODED BLUFFS, TOWN OF CASTLE ROCK, GRANT COUNTY

Taken from bluff above County Trunk G, 1930

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performing seasonal work on the better farms. During the eighties, when the rush to Nebraska, western Iowa, and South Dakota was in full tide, many of those people, both Bohemians and Norwegians, sold their inferior farms for what they would fetch and went West where most of them vastly improved their economic conditions. They were now equipped to farm on the best prairie lands whereas, in their first settlement it was necessary for them to take what could be had cheap.

These removals operated to bring about consolidations of several small farms into an ample one, or to add small farms to neighboring larger ones, a very important preparation for the new dairying economy which, as we saw, went far to eliminate the differential between the rough-land farms and the prairie farms. The numerous Bohemians and the few Norwegians who remained in the town, have become prosperous dairy farmers, the former particularly having absorbed a large share of the best pioneer American and German farms. Thus has the community been reconstructed.

Technically, there probably is no Norwegian, German, or Irishman in the town today. Twenty-five years ago the last state census reported the presence there of 711 persons of whom 525 were native-born, 186 foreign. All the natives except 26 were of Wisconsin birth. Among the foreigners were 145 Bohemians, 12 Germans, 2 Canadians, 2 English, 2 Irish, and 23 Norwegians. The pioneers are now practically all gone and their children are mainly, if not exclusively, of American birth. Some of the latest arrivals among the Bohemians, however, are still living.

CHAPTER XV

AMERICANIZING THE FOREIGNERS

THE word, Americanization, which goes so trippingly over the tongue, and seems to us so simple in its connotation, conceals elements of baffling complexity. Webster's definition represents both the popular idea and the united wisdom of the lexicographers. He says: "*Americanize.* To render American; to assimilate to Americans in customs, ideas, etc.; to stamp with American characteristics."

The third alternative is particularly interesting. A stamp suggests an engraved design, in strongly resistant metal, the impress of which can be reproduced as often as the original shall be imposed with sufficient force upon a yielding substance like parchment, paper, or wax. Applied to the subject in hand, it means that the recipients of the impression are exclusively persons of foreign birth who have found their way into the United States. These, experience has revealed, are of different races, of manifold culture types, and with individual variations ranging from the social polished diamond to the leaden dullard. Yet, all are to receive the one unvarying stamp of Americanism.

The artist who etches a design for a stamp must have before him either a real or imaginary original after which his engraving is fashioned. Where is the original of the American whose characteristics we aim to stamp upon the foreign-born around us? Clearly, it is not the

aboriginal found on our coasts by the first European colonists. It is not the Virginian of the Revolutionary period and beyond; nor yet the Pennsylvanian, Marylander, Dutch New Yorker; nor the man of the Appalachian Plateau, the Southwest, the Northwest, or the Great Plains. The ideal from which our social artist executes his stamp is one which has been dominant in the Middle Northwest for a hundred and thirty years and is realized most completely in the New England-New York Yankee. Five generations of our people have accepted as our very own "Uncle Sam" the quaint, lanky, raw-boned, whiskered, booted, and "gallussed" figure who continues to amuse the connoisseurs of the monthly crop of cartoons and the patrons of the legitimate stage.

Of course, Uncle Sam is a caricature: that is why he amuses us. But the original must have some of his characteristics, else we would refuse to recognize the caricature. We know, too, that there have been variations among the Yankees as wide as those represented by Daniel Webster on the one hand and Jake Frink on the other; also, that a broad line of demarcation can be drawn between the cosmopolitan Yankees from near the New England seacoast and the foresters of the New England hinterland so bitingly denounced by that apostle of Yankee culture, Dr. Timothy Dwight.

Perhaps as good a picture of the westward drifting Yankee of one hundred years ago as we now have was supplied by a foreigner, the philosophical French traveler and student, Michael Chevalier. He says: "The Yankee . . . is reserved, cautious, distrustful; he is thoughtful and pensive, but equable; his manners are without grace, modest, but dignified, cold, and often unprepossessing; he is narrow in his ideas, but prac-

tical, and possessing the idea of the proper, he never rises to the grand. He has nothing chivalric about him and yet he is adventurous, and he loves a roving life. His imagination is active and original, producing, however, not poetry but drollery. The Yankee is the laborious ant; he is industrious and sober, frugal, and, on the sterile soil of New England, niggardly; transplanted to the promised land in the West he continues moderate in his habits, but less inclined to count the cents. In New England he has a large share of prudence, but once thrown into the midst of the treasures of the West, he becomes a speculator, a gambler even, although he has a great horror of cards, dice, and all games of hazard and even of skill, except the innocent game of bowls."[1]

Chevalier also says: "The fusion of the European with the Yankee takes place but slowly, even on the new soil of the West; for the Yankee is not a man of promiscuous society; he believes that Adam's oldest son was a Yankee." The pertinence of that observation will become apparent at a later stage of this discussion.

To answer the question, how the Yankee became for us the ideal American would take us too far afield. It would call for a summary of the dynamics of American civilization so far at least as the North is concerned. Peoples gain their ideals much as do children, and the young boy who watches his favorite uncle perform the most notable deeds in his restricted calendar, physically, mentally, and spiritually, will instinctively make that uncle his hero. It would perhaps be nearly as effective to have his mother belaud a particular uncle above all the rest. The Yankee was held up to the admiration of the millions of our youth through the schools, the church,

[1] *Society, Manners, and Politics in the United States* (Boston, 1839), 115-116.

and the books they read. His idealization was thus made inevitable.

The New England-New York Yankee, being our model, it has been the policy to impart, as rapidly as possible, to newcomers, those desirable qualities of industry, thrift, cleanliness, sobriety, and intelligence which signalize the Yankee in his best estate: also to awaken an interest in local public affairs, in politics, and so far as possible in the favored Yankee varieties of religion.

All unconsciously we assume that the interplay of personality, customs, ideas, which occurs whenever a disparate group is brought in contact with us, issues necessarily in the modification of the other group, as if the resulting attrition operated like that of a diamond on a piece of metal. In the Yankee's contact with many of the foreigners that was nearly true but not quite. Always there was something for the American to learn from Irishman, German, Norwegian, or Bohemian whom he was bent on Americanizing. Mental and spiritual impressions, to be sure, went unrecorded; moral effects are more easily traced and one of these results from difference in attitude toward labor. Whereas, in the course of four or five generations marked by material accumulations, the Yankee had grown somewhat selective in his choice of work, preferring the lighter forms, the foreigner gave him an example of willingness to take hold of anything however "menial" or grinding. It might be grubbing stumps, digging ditches, cleaning streets, chopping cordwood, quarrying stone, or mining coal. In most particulars, he was ready to match his physical prowess against any kind of job for the sake of making a living, just as the Americans had been in early colonial times or under the temporary

stresses of pioneering which were so quickly forgotten after prosperity had been achieved.

A more positive effect was produced whenever a despised foreigner could prove himself capable of doing something which Americans were unable to perform. This happened frequently, for in craftsmanship the training Old World masters gave their long-term apprentices imparted a higher degree of technical skill than was usual in this country. It is not an accident that in many western communities the mechanic trades passed rapidly from the hands of Americans into those of foreigners. Carpenters, smiths, wagon makers, stonemasons, plasterers, millwrights were usually foreign trained and some of the most important mercantile and manufacturing plants were built up by men who began with a capital limited to their craftsman skill.

The foreign immigrants were not all peasants; there was always a sprinkling of professionally trained men, especially theologians and doctors, and in these, particularly the latter, Americans soon detected the results of a more rigorous training than was common among the native practitioners. The Western Medical Society of Wisconsin, representing Grant, Iowa, and Lafayette counties, in 1850 reported that out of sixty practitioners only twelve were entitled to be called "doctor." This condition was corrected by the coming of foreign doctors.

Americans are proverbially deficient in music, in appreciation of art, and in aptitude for the learning of languages. On the other hand, many foreigners, even the humblest of them, have been adepts in these lines. An Italian workman, listening to an American band, broke out impatiently with: "All botched up; all botched up! That's not the way to play *Il Trovatore*."

Art and pageantry, which are prominent adjuncts of Old World religions, came in with the immigrants to impress the natives willy-nilly. While Americans did not, in general, learn the immigrants' language, for convenience in communication they often picked up a few key words, enough to prove to themselves that it was possible to speak through the mouth instead of the nasal organ. They did not, individually, adopt the "outlandish" religions of the immigrant groups, to any considerable extent, though in some instances American church organizations granted financial aid to churches founded by such groups; and, of course, the mere physical presence of Catholic or Lutheran churches, so differently equipped from the Methodist, Congregational, or Baptist, and with so much greater emphasis on ceremonial, produced its effects on the minds of the more tolerant Americans.

Yet, when all is said that can be said to disclose the other side of the picture, the foreigner was influenced by the new contacts both more variously and more fundamentally. First of all, his was the psychology of the adventurer or waif. The great fact of being adrift from his home and among strangers in a strange geographical setting, subject to accident and injury, sharpened his faculties of observation, made him wary, patient, inquisitive. The new landscapes gave rise to comparisons and questionings, unfamiliar costumes, occupations, methods of working, industries, social customs impinged on the mind forcing activity even in the normally phlegmatic. The first step in Americanization was physically to cease being a European.

This fact of transplantation was basic in the history of adoptive citizens. Let a Cornishman or Welshman cut loose from his clan, board an emigrant ship at Ply-

mouth or Liverpool, cross the Atlantic, and after a multitude of experiences which to us seem trivial but to him were the essence of romance or tragedy, effect a settlement at Mineral Point or Beetown, and he is no longer as when he was laboring with pick and gad in the tin mines of Cornwall or the coal measures at the sources of River Dee. From a static individual, living a life governed almost wholly by habit, he has been changed into an adventurer looking out eagerly upon a world of new lands, new people, new cities, villages, farms, mines, and workshops. The foreigner in our midst is ready for new adjustments by reason of having been disadjusted to the old home.

Fortunately, in the earlier time at least, the new adjustments came with a measure of naturalness, involving no violent breaks with customary procedures. There was work at the windlass, in shaft or drift, which to the "Cousin Jacks" meant taking hold about where they had let go; work on the farms, so congenial to German and Norwegian; work on railway grades, building, ditching, and digging to which the Irish peasant immigrant, inured to the heavy labor of the peat bogs, had virtually been trained from youth.

The next step, farming on their own account, was possible to achieve through the cheapness of both public and privately owned lands, and except in heavily wooded areas, the operations of home building, breaking sod, planting, and cultivating the crop were in no sense mysterious, often markedly similar to what they had been at home, and in most respects readily learned. So, also, were the social, legal, and customary obligations of citizenship in the rural states. But in getting into the stride in the new environment, the foreign im-

migrant was already tending to make himself over into an American.

One secret of the immigrant's success in applying habitual skills to situations partly new, was the generally hopeful spirit in which he labored. He was now in the land of his dreams, a sharer not only of its free institutions but of its opportunities for advancement toward well-being if not wealth. Labor for hire was endurable because it would soon be exchanged for self-directed labor; grinding toil when it cleared new acres for tillage could be endured with fortitude.

It would be a strained interpretation of Americanization as popularly conceived to declare that when the foreigner has contentedly settled down, found his opportunity for productive labor, and adapted himself to the demands of his new situation economically and legally, he has become a good American, though a case could be made out for such a view. The good American is one who does his country good, not harm, and no faithful, law abiding worker should be denied that meed of praise. Of thousands and hundreds of thousands among the native-born nothing better than this can be said. Nevertheless, something more is desirable, for the best citizen is he who aids in directing public affairs as well as his private business; who exerts an influence toward the making of a better community, state, and nation; in a word, who makes himself a function of the organization to secure what is generally called social betterment.

Not all Americans are fit for that higher calling, despite the blessings of nativity they enjoy, and it goes without saying that such foreigners as may be fit for it by nature are obliged to undergo a preparatory apprenticeship which is more or less drastic depending on whether or not it involves learning a new language. The

foreigners in early Wisconsin, to take a typical instance, divided into those who were English-speaking, and those who were not. The first class found little difficulty in participating freely with the Americans in all phases of public life, so soon as the right of citizenship had been obtained, and we find men of English or Irish birth appearing very early in territorial and state legislatures, in the constitutional conventions, in the courts, and in the county offices.

Germans, Norwegians, and Bohemians appeared much more tardily. Their great handicap was in being limited to an alien tongue. For language is one of the deeper parts of life. Its development in the individual is a slow, painful habit-forming process involving most intricate mental and physical coördinations. Once thoroughly habituated to his "mother tongue," the average person will never be able to exchange it for another language, or even to supplement it with a superficial knowledge of a different system of speech. Yet, the millions of immigrants from Germany, the Scandinavian countries, Bohemia, Poland, and other non-English-speaking countries, were forced to learn the difficult English language if they dared hope to participate, on a plane of equality with Americans, in the higher social activities.

It is not strange that a large proportion of them found the task humanly impossible, thereby failing to attain the grade of social importance for which essential character and fundamental training in their native language had designed them. In the competition with Yankee and Englishman, the German or Norwegian, Bohemian or Pole never had an equal chance.

The sense of inferiority almost universally manifested by non-English-speaking immigrants, in the

presence of native Americans, had its main root in the embarrassments of communication. Other inequalities contributed also: superior economic status, official prominence, social prestige. But as compared with the language handicap, these were readily overcome. When a distinguished Norwegian government official found that his countrymen in Wisconsin displayed a strong feeling of reverence for "these mighty Yankees,"[2] the fact suggested to him the need of better cultural opportunities for the Norwegians in their own language. But he had just shown that, as soon as Norwegian young men have learned to speak a few current English phrases "they at once become strangers to their less fortunate countrymen and are very loath to admit their Norwegian origin." If industry was the key to the American treasure-house, English was the social escalator.

The means of overcoming the language inequality were mainly three—personal training or special talent, long and intense exposure of the immigrant to the American social *milieu*, and the public school. Difficult as the venture was to all, a certain proportion of the adult immigrants were able either through native aptitude or through the exceptional linguistic training they had enjoyed, to master the English language in record time. Carl Schurz required six months to acquire such facility in it as enabled him to converse freely with intelligent men on subjects not very abstruse. Few gained in a briefer period of time even the degree of fluency necessary for everyday communication with their fellows; yet, if a foreigner were domiciled with an American family, as in the cases of farm hands or domestics, and heard nothing but English, he soon acquired at least

[2] Ræder, *America in the Forties*, 40.

a short working vocabulary and some sense of form in expression. Men whose intimate communications were confined to their own family circle often remained linguistically "foreign" throughout a long life in America, and what was true of the men was doubly true of the women.

The chief public agency of linguistic unification was the common school; there instruction was in English and play was usually in English also. Children's minds being plastic, it required but a short time for them to learn enough English words to carry on playground conversations, while everyday's wrestling with lessons left its trace in an enlarged vocabulary, and a better mastery of speech and writing. In a few months boys and girls might even be weaned from their mother tongue, preferring to hold all their communications in English. The next step was to speak it in the home, and practically coerce the parents into speaking it also.[3]

However, the common school, important though it was as an agent for implanting the new English speech where formerly alien tongues held sway, was not of itself able to develop the English of foreigners very far without the aid of other influences. What was needed was intensive training, for a period of years, in the best use of the language. The convert—cut off from his native tongue whose roots went down to the very springs of life—was so enslaved by the tyranny of English words that anything beyond the commonplace expression of familiar ideas was beyond him. Exceptions there were, to be sure, but the vast majority of the foreign-born and their children, educated in the American common school, remained rudimentary in their linguistic

[3] See statement of Balthasar H. Meyer, in Schafer, *Four Wisconsin Counties*, 244-246.

development and quite incapable of anything like artistic expression, in either oral or written speech. In a word, the linguistic undernourishment which is so painfully prevalent despite our boasted universal education, is due in part to the policy, impossible to execute, of melting down the foreigner quickly into the mass of American society.

Even with the handicap of the foreign tongue removed, and the ability after a fashion to communicate with their fellows in English, foreigners of alien speech stocks continued to suffer from an inadequate power of self-expression. Whether or not individuals were conscious of their deficiencies in this respect, the constituents of candidates for school board, town chairman, county clerk, representative or senator in the state legislature were quick to draw comparisons between those who could talk well and those who were awkward or uncouth.

The consequence was what might have been expected. English and Irish citizens had no difficulty in securing public recognition; for Germans and other non-English-speaking foreigners this presented a serious problem. A canvass of the lists of town officers in the towns of the three lead region counties shows that for seeking the office of town chairman Norwegians and Germans barely attained to an equality with others prior to 1870. This means that, in round numbers, an American apprenticeship of twenty-five years' duration was imposed on these people before they were thought fit to be entitled, like the rest, to this much sought local distinction. Even in towns where the majority of the voters were Germans or Norwegians, while other members of the town board might be of those nationalities, the chairman was apt to be a Yankee, Irishman, or

Englishman. The same was true of legislators except in distinctly foreign communities.

By way of summary of this phase of the subject, we may simply repeat what was said above: "In the competition with Yankee and Englishman, the German or Norwegian, Bohemian or Pole never had an equal chance."

Chevalier, as we saw, found that the Yankee fused with Europeans but slowly. How true that statement was the French traveler could not have known otherwise than from the observation of external social conditions in his day, for there existed at the time no statistical researches on the subject of intermarriages. In fact, such studies are rare even today, probably because of the painful process which must be gone through in making them. There is, however, a well-settled belief in the significance of such fusion as has occurred. Intermarriages are presumed to be at once the sign of social harmony and the sure means of bringing about more perfect unification.

In Wisconsin studies have been made covering restricted localities—the city of Milwaukee, the rural towns of four lake-shore counties, and the rural towns of the three southwestern counties. The results obtained in the three studies tally very closely so far as they are comparable, and a good cross section can be had by summarizing the latest of them, for the counties of Grant, Iowa, and Lafayette, the Lead Region. The basis of the study was the manuscript censuses for 1860, 1870, and 1905 which list by name all persons living in the counties and indicate each person's birthplace. If the head of a family is described as "Henry Smith, 60, N. Y.," that means he was a native of the United States; but if "Bridget, 58," was born in Ireland, that means

that there had been in this instance an intermarriage between an American and a native of the "Emerald Isle."

Now, in 1860, the census discloses an aggregate of 831 such cases for the three counties concerned. The total number of family heads being 11,357, the intermarriages equaled approximately 7 per cent of all marriages. In 1870 the total number of family heads was 13,270, of intermarriages 1,370 or slightly more than 10 per cent; while in 1905 the intermarriages numbered 1,259, the aggregate of families 11,069, or about 11 per cent.

These facts, when taken at their apparent value, seem rather impressive. If 10 per cent of existing families actually represent a mingling of the blood of old line Americans with foreigners of diverse breeds, then a biological fusion is slowly taking place which holds the promise of ultimate social unity. But can we take the facts at their face value? So far as they depend on the national censuses of 1860 and 1870 we are not at liberty to do otherwise, for there is no way of checking the results. When, however, we come to the state census of 1905 (and the same would be true for any of the national censuses after 1870) the case is different. That is to say: these later censuses not only record the birthplace of the named person, but also indicate the nativities of his father and his mother. Taking for demonstration purposes the largest of the three southwestern counties, and counting all cases of intermarriage in both rural and urban towns, we find the aggregate for 1905 to be 952. Checking each of these again for the derivation of the individuals, we discover that 64 per cent of the apparently mixed marriages were actually marriages between persons of identical racial stock. To illustrate let us say, Hans Schmidt, born in

Germany, was married to Amelia, born in Wisconsin—a native American. But Amelia's parents were both born in Germany, not in New York or Connecticut. In reality, the proportion of intra-racial unions in this list of 952 was doubtless much higher than is indicated by the 64 per cent; for in our count we regarded German and Swiss, English and Virginian, German and Pennsylvanian, and similar combinations as non-identical when the probability tends the other way. Should a patient investigator report, as a generalization, that not more than 25 per cent of all seeming intermarriages actually represent a blending of diverse stocks, we would hardly be justified in questioning his conclusion.

Therefore, during the history of this western area, from its settlement down to a quarter of a century ago, the progress of Americanization on the biological basis can be regarded as almost negligible. While there has been a vast deal of social mingling of different stocks, the "melting pot" has hardly begun to simmer. Truly, as the French philosopher declared, "The fusion of the European with the Yankee takes place but slowly." Whether this is because the Yankee is "not a man of promiscuous society" who thinks "Adam's oldest son was a Yankee," we do not know. Perhaps a kind of instinct induces men and women of all races normally to select as mates those of deepest potential spiritual kinship with themselves, and these can be found nowhere so surely as among those representing a long tradition of similar or identical cultures.

Some light is thrown upon this question by a subordinate study of the intermarriages between others than the Americans in Grant County in 1905. Here we encountered a surprise for, while it was thought possible that "foreigners tend to marry each other even more

than they marry Americans," as one commentator put it on the basis of local observation, we found only 75 cases of intermarriages between foreigners as against 952 American and foreign. Even this is an over-statement, if our concern is with racial divergencies rather than names of countries. In the above count English, Scotch, Irish, and Welsh were considered separate foreign groups, also Swiss and German—classes between which was no language barrier.

In 1860 we find that the 286 native-born *men* of our three counties who married foreign-born women selected English-speaking mates in all but 30 cases. This was normal, for the men were English-speaking themselves. We know from all our marriage records that the controlling factor in mating is cultural congeniality of which a common language is the foundation fact. Religion does not yield so readily to statistical determination. But a careful observation of "who marries who" leads inevitably to the belief that common church affiliation is present in the vast majority of the intermarriages recorded. Other social facts, such as family respectability and equivalence of worldly fortune, in other words "status," can be assumed on the basis of common knowledge.

The above inquiry, so far as it may be taken as representative at least of rural America in the nineteenth century, discourages the idea of a universal "melting pot" in which nationals of all countries are promptly subjected to an ennobling biological fusion. On the other hand, it dissipates the dread fear that our population may be undergoing a "mongrelization," after the manner of dogs in a permanent "village pound," as suggested by some writers on immigration and its results.[4]

[4] See, for example, Henry Pratt Fairchild, *The Melting Pot Mistake* (Boston, 1926), 124 ff.

The historical fact, as is so often the case, seems to be between those two extremes. The several race elements tend to persist in their purity long enough to permit a gradual approximation to the social type all are striving toward, namely, that of the ideal American citizen. In other words, the human ingredients which go into the mixing bowl, diverse in origin and still showing appreciable variations, are in character far removed from the postulated "raw materials" of our melting pot theorists. On the one hand, the American is no longer the hard, unimaginative, unsympathetic Yankee, passionately intolerant of "the lesser breeds," but a man whose temper has been modified and horizon widened through neighboring with other types of men and women. On the other hand, the European in the mixture has ceased to be a "foreigner." He has become the bearer of many of the standard social qualities of good Americans without having discarded all the valuable traits appropriate to his particular lineage.

The practical bearing of this study is plain. It is in the highest degree socially desirable that our citizens of foreign birth, and their children, should attain so perfect a social equivalence with those of a longer American lineage that the question of the novelty or venerableness of the American tradition shall be no longer a deterrent when young persons come to the crucial decision concerning life partners; for only under such conditions will Americans be justified in considering the process of social unification as completed. The economic factors in the problem tend to eliminate themselves since foreigners have demonstrated their ability to assemble property and to keep it quite as well as the Yankees. Of the more recondite social factors the key is language. By this we mean not merely the

smattering of English which enables one man to talk to another about the weather, the crops and the cows, but such a mastery as will enable a man to talk to an intelligent, refined woman in a way to give pleasure if not instruction.

While didacticism is uncongenial to the historian, this survey suggests that the burden of making our people skillful users of English must be placed where society has so cheerfully and hopefully laid all its major social problems for a hundred years—upon the school. The question of English teaching has long been a burning one among the directors of education, and a full discussion of Americanization may exhibit from yet another angle the imperative need of special emphasis on that feature of the educational problem. It is largely with the descendants of foreigners we have now to deal —generations whose cultural level might be higher were it based upon the development of their native speech rather than an imposed alien one. To them, we owe a training calculated to yield such a mastery of spoken and written English as may prophesy at least a touch of artistry in its future use.

There was design in using the term "cultural *equivalence*." It is not necessary, or wholly desirable, that there be *identity*. In putting forth the effort required for gaining substantial equality with old line Americans the foreign-born and their children will have done their full duty. It is for our own people to accept, not with mere tolerance but with heartiness, traits, customs, habits, which though "different" are fundamentally "good." The growth in native cosmopolitanism should not be permitted to lag behind the foreigner's progress in substantial Americanism.

APPENDIX

APPENDIX I

MOVEMENT OF LEAD AND LEAD PRODUCTS TO AND FROM AMERICA, 1791-1861

	Imports			Exports			
Date	Pig, Bar and Other Lead. lbs.	Shot lbs.	Lead. lbs. White and Red	Pig, Bar etc., Lead. lbs.	Shot lbs.	White and Red Lead. lbs.	Am. Product Lead and Mfgs. of Lead. lbs.
1791	2,113,693	.....	.....	33,000[3]	6,473	.....	.....
1792	1,727,333	.....	.....	25,256	3,500	.....	.....
1793	1,526,722	.....	.....	25,000[4]	952	.....	.....
1794	1,970,030	.....	.....	11,300	14,000	.....	.....
1795	3,069,104	.....	.....	32,911	.....	.....	.....
1796	2,076,816	.....	.....	1,199,431[5]	.....	.....	.....
1797	810,910	.....	.....	306,189	.....	.....	.....
1798	659,615	.....	.....	24,662	.....	.....	.....
1799	2,967,760	.....	.....	6,985	.....	.....	.....
1800	2,732,957	.....	.....	420,020	.....	.....	.....
1801	2,331,113[1]	.....	.....	538,972	.....	.....	.....
1802	1,615,284	.....	.....	.....	.....	.....	.....
1803	2,271,438	.....	.....	.....	61,918	.....	.....
1804	3,545,498	.....	364,648[2]	.....	147,982[6]	.....	.....
1805	3,656,681	.....	1,810,995	356,342	.....	48,090	.....
1806	3,656,681	.....	2,731,253	326,984	.....	70,244	.....
1807	2,455,884	.....	2,804,093	321,487	.....	37,825	.....
1808	2,354,227	.....	1,963,108	19,443	.....	42,008	.....
1809	677,332	.....	2,099,964	359,582	.....	6,154	126,537
1810	1,520,702	.....	2,680,299	119,472	.....	41,472	.....
1811	1,837,702	.....	1,938,799	125,525	.....	30,183	.....
1812	999,400	.....	459,426	80,327	.....	300	.....
1813	533,250	.....	1,003,737	282,340	.....	.....	.....
1814	60,367	.....	282,841	53,680	.....	.....	.....
1815	3,240,670	.....	2,602,200	11,604	.....	3,070	.....

[1] Only 5,000 pounds of this came from Florida and Louisiana. The great bulk came from British ports with a regular but small proportion from Hamburg and the Hanse ports.

[2] First mention of these products by name.

[3] Aside from 45 "sheets," weights not given.

[4] Estimated "1 T sheet, 241 pigs."

[5] Exported to China, East India, France, and West Indies.

[6] These exports are described as of foreign manufacture but their importation is not noted.

APPENDIX I

MOVEMENT OF LEAD AND LEAD PRODUCTS TO AND FROM AMERICA, 1791-1861—Continued

	Imports			Exports			
Date	Pig, Bar and Other Lead. lbs.	Shot lbs.	White and Red Lead. lbs.	Pig, Bar etc., Lead. lbs.	Shot lbs.	White and Red Lead. lbs.	Am. Product Lead and Mfgs. of Lead. lbs.
1816	13,840,970	.....	7,714,715	975,717	.....	173,084	.....
1817	4,102,798	.....	1,739,941	2,762,592	.....	206,041	.....
1818	3,418,218	.....	2,354,405	1,655,662	.....	32,222	281,168
1819	2,332,084	.....	2,040,696	94,362	.....	.....	.....
1820	.....	.....	.....	444,386	.....	109,132	25,699
1821	5,488,005	.....	3,978,649	67,468	.....	.....	.....
1822	3,538,127	.....	4,001,125	448,606	.....	105,231	63,316
1823	2,324,642	1,097,719	3,539,245	112,395	.....	62,428	51,549
1824	1,661,376	571,180	3,127,227 1st qtr.	485,414	.....	130,549	.....
	423,913	49,149	884,320 4th qtr.	.....	.....	.....	.....
1825	5,867,520	127,091	1,994,618	1,335,420	.....	106,893	189,930
1826	5,849,100	93,945	1,817,991	2,804,253	.....	127,926	47,330
1827	7,986,679	39,183	2,161,826	3,918,432	.....	131,245	63,074
1828	8,076,796	88,549	3,987,565	2,614,462	.....	111,141	76,882
1829	1,639,689	7,728	364,493	2,512,067	7,915	216,367	179,952
1830	712,970	9,625	244,318	1,239,589	.....	486,679	128,417
1831	2,108,165	6,965	111,178	2,102,544	24,857	164,638	152,578
1832	5,333,588	8,563	557,781	3,162,159	8,088	72,113	72,439
1833	3,289,970	2,086	379,270	2,868,410	4,800	55,555	119,407
1834	5,104,850	321,507	1,024,663	937,991	21,255	88,616	13,480
1835	1,423,440	77,095	832,215	324,652	1,896	77,604	50,418
1836	989,999	12,777	908,105	706,364	1,413	62,234	34,600
1837	465,434	11,665	599,980	329,355	1,117	72,320	297,488
1838	225,298	1,247	522,681	693,550	11,200	79,476	375,231
1839	565,430	5,063	727,498	257,784	8,369	46,960	81,377
1840	567,142	1,460	643,418	1,651,705	.....	58,575	882,620

APPENDIX I

MOVEMENT OF LEAD AND LEAD PRODUCTS TO AND FROM AMERICA, 1791-1861—Continued

	Imports			Exports			
Date	Pig, Bar and Other Lead. lbs.	Shot lbs.	White and Red Lead. lbs.	Pig, Bar etc., Lead. lbs.	Shot lbs.	White and Red Lead. lbs.	Am. Product Lead and Mfgs. of Lead. lbs.
1841	98,387	1,863	532,122	2,551,967	.....	30,058	2,387,514
1842	4,689	18	497,738	14,552,357	.....	6,270	14,552,357
1843[7]	13,204 (value $207)	100	93,166 [$5,600]	15,366,918	.....	1,148	15,366,918 (value over million)
1844	3,430 [$102]	95	222,213	18,420,407 [$595,000]	.....	.....	18,420,407
1845	19,609	1,341	14,272	10,188,024 [$342,000]	.....	.....	10,188,024
1846	7,471	524	215,434	16,823,766 [$615,000]	.....	9,457	16,823,766
1847	27,962	175	488,045	3,326,028	.....	.....	3,326,028
1848	324,905	980	298,387	1,994,704	840	.....	1,994,704
1849	2,684,700	350	318,781	933,621	.....	22,140	680,249
1850	36,997,751	114,106	853,463	1,752,349	.....	.....	261,123
1851	43,470,210	161,123	1,105,852	4,125,445	.....	8,609	229,448
1852	37,544,588	22,000	842,581	4,124,486	26,500	13,483	747,930
1853	47,714,140	21,900x	1,865,893	813,127	24,930	44,263	404,247
1854	43,174,447	2,400x	1,224,068	1,452,284	.....	2,000	100,778
1855	56,745,247	129,134x	2,319,099	1,695,677	.....	385,126	.....
1856	55,294,256	466,162x	3,548,409	2,369,009	4,796	146,685	.....
1857	47,947,698	309,521	1,793,377	4,102,957	2,425	17,988	.....
1858	41,230,019	237,204x	808,528 R 977,323 W	2,507,559	4,245	22,087	(only 1,305 lbs. red lead)
1859	63,782,098	55,220x	4,077,598	1,140,516	1,592	40,694	.....
1860	42,470,157	154,000x	1,311,172 R 1,508,765 W	1,054,782	390	7,042	.....
1861	36,760,112 62,382	.....	1,970,459	1,642,057 169,316	.....	16,350	.....

[7] In 1843 the United States imported 93,166 pounds of white and red lead. Of that quantity 85,318 pounds, or slightly more than 90 per cent, came from English ports. This is approximately the usual proportion.

x Shot and pipes.

APPENDIX II

Origin of the Wisconsin Lead and Zinc Deposits

PAUL A. SCHAFER

The lead and zinc region of Wisconsin occupies that part of the state lying west of the eastern boundaries of Iowa and Lafayette counties and south of Wisconsin River. This artificial boundary does not imply that there are uniformly distributed ore bodies within its limits, but simply that most of the mines are included in that area. The mines are bunched in local rich areas with wide mineralogically barren stretches between, the peculiar geographic distribution being explained by the geology of the region. The main districts are in the vicinity of Highland, Dodgeville, Linden, Mineral Point, Platteville, Potosi, Beetown, Meeker's Grove, Cuba, Hazel Green, Leadmine, and Shullsburg. This order is given with no regard to relative productiveness. Considered geologically, the adjoining portions of Illinois and Iowa should be added to the Wisconsin district to make a complete unit.

The terrain is a low plateau dissected by numerous streams, part of which flow northward to the Wisconsin and the remainder south and westward to the Mississippi. The boundaries are wholly within the driftless area, an area untouched by glaciation when the surrounding region had its surface moderated and its drainage disrupted by the passage of the continental

ice sheet. This country, therefore, gives us an idea of the way the southern part of the state looked before the arrival of the glacier.

The presence of lead and zinc attracted many geologists to this field and the commercial importance of the deposits with the continued search for more ore, warranted frequent reëxamination and remapping in the hope of distinguishing geologic features which would facilitate such enterprise. Much work was done and a wealth of scientific information accumulated. National and state surveys were initiated and carried on at intervals from 1839 to the present time. David Dale Owen was intrusted with the first national survey of the lead region and he, with an army of assistants and laborers, literally combed the field in a remarkably short space of time. J. D. Whitney briefly described the district in 1854 in his book on the metallic wealth of the United States. Later he was employed by the states of Iowa, Wisconsin, and Illinois and thoroughly covered the ground. His account is notably complete and his observations accurate.

Moses Strong and later T. C. Chamberlin made the most elaborate study of the region for the Geologic Survey of Wisconsin. Accompanying the description is an atlas covering much of the productive area. The presence of lead and zinc in Missouri showing certain similarities to those in the Upper Mississippi valley, led geologists from that state to examine the Wisconsin field. Working for the Missouri Geological Survey, Arthur Winslow and James B. Robertson visited southwestern Wisconsin in 1893.

Discussion regarding the origin of the ores reached a climax in 1893 and 1894 when numerous papers were published on the ores of the entire Mississippi valley.

W. P. Jenney, Arthur Winslow, W. P. Blake, T. C. Chamberlin, and others contributed to the symposium.

During the period 1900 to 1906 the national and state surveys again entered the field, studying and mapping the geology coöperatively in an intensive manner. U. S. Grant, representing the state of Wisconsin, coöperated with H. Foster Bain who was in charge of the survey for the national government. These two surveys contributed much to the knowledge of the region especially through the detailed mapping of the structure of some of the important mining districts by Grant, and the careful analysis of the chemical and physical processes operating to produce the ores as deduced by Bain.

Charles R. Van Hise studied the region and doubtless gained much valuable information for his analysis of the work of underground waters which is incorporated in his voluminous *Treatise on Metamorphism.* Guy Henry Cox and W. H. Emmons are later contributors to its geology, especially with regard to the origin of the deposits, the former in 1911, the latter in 1929.

The lead region geology is relatively simple. On a floor of Pre-Cambrian crystalline rocks recline the nearly horizontal Paleozoic sediments—sandstone, limestone, dolomite, and shale. Although nearly horizontal, these strata have a slight southwest inclination. From bottom to top they comprise the Potsdam sandstone, Prairie du Chien dolomite, St. Peters sandstone, Platteville limestone, Galena dolomite, Maquoketa shale, and Niagara dolomite. The inclination of the formations is greater than the southwestward slope of the surface, resulting in a truncation of the beds, exposing the lower ones in the north and the higher ones in the south. This truncation is especially marked north of the divide

where the tributaries of the Wisconsin give the surface a northward inclination as opposed to the reverse inclination of the strata.

Traversing the region from the Wisconsin River near Muscoda to the Mississippi near Dubuque, Iowa, the traveler cannot fail to make certain geological observations. In the north the valley floors, beneath the loose river deposits, and the lower slopes of the valley walls, are underlain by sandstone (Potsdam). Higher on the slopes, farther up the valleys, and on the upland is exposed the Prairie du Chien dolomite. Continuing on toward the divide up the headwaters of the streams just north of Montfort or Fennimore the observer quickly passes over the exposed edges of the St. Peters sandstone and the overlying Platteville limestone. The spectacular erosional features of the St. Peters sandstone, cliffs, and pinnacles such as Castle Rock, quickly catch the eye because of their rugged picturesqueness. The more resistant Platteville limestone forming a protective cap on the friable and easily eroded sandstone, has permitted the lower part of the sandstone to be worn away more rapidly than the upper part, producing overhanging cliffs and chimney rocks. In contrast to the rugged erosional forms of the St. Peters with its resistant Platteville cap, the Galena dolomite underlies the gently rolling upland of the divide and a scope of country to the south. Crossing the divide, if one keeps to the highland, he finds the Galena exposed all the way to the Mississippi, but he crosses successively higher portions of the formation until, at the bank of the Mississippi, he can see on the opposite slopes of the valley both the Maquoketa shale and Niagara dolomite. Indeed, a little farther east near Platteville, Hazel Green, and Shullsburg, the Maquoketa shale is thinly exposed as a plaster

on the top of the Galena. Should the traveler pass down a valley such as that of Platte River, he would find the St. Peters sandstone and the Platteville limestone forming cliffs along the valley walls beneath the cap of Galena dolomite. The Niagara is exposed in only a few places near the Illinois boundary and at Blue Mounds. The last named locality makes an excellent vantage point for the observation of the surface features and the geologic control of such features in this part of the state. The mounds are capped with Niagara. The nearest exposure of the same rock is far to the south near the Illinois boundary. Once it extended as a complete unit over this entire region, but erosion has eaten the surface down until only this remnant remains as a testimony to its favored position on the divide where the gnawing headwaters of the streams have not had complete access.

The old Pre-Cambrian crystalline rocks are not exposed in southwestern Wisconsin. For information regarding them it is necessary to go to central and northern parts of the state where they are not covered by later sediments. It is not possible to determine exactly what kinds of rocks make up the Pre-Cambrian in this region, but we can say that they are crystalline, igneous, and metamorphic, and of very complex structure. The Pre-Cambrian surface on which the Paleozoic sedimentary rocks were deposited is not exactly plane, but contains rolls, swells and depressions, knobs, basins and ridges. These are the natural irregularities to be expected on any sea floor and they must be reflected in the attitude of the sediments deposited on that floor. The sediments in this region, when examined in detail, show precisely such features.

It is significant that the ore bodies are almost always located in structural basins or regions where the sea floor, at the time of deposition of the rock, was a depression. The Galena formation contains most of the ores, especially where the "oil rock," a shale containing an abundance of organic matter and lying at the base of the Galena, is thickest. Some mines, in the northern part of the district, are located in the Platteville. The ore occurs as fillings of cavities caused by the opening of joint and bedding cracks by the solvent power of circulating underground water. Limestone and dolomite are particularly susceptible to solution by water percolating through cracks in the rock as may be seen in the cavernous limestone regions of Kentucky, Tennessee, Virginia, and elsewhere. The ore bodies are classified according to their shapes as crevices, pitches and flats, runs, and openings. The crevices are simple joint cracks filled with ore. These are usually not continuous but a number of them are arranged *en echelon*, forming what is called a range. Pitches and flats are peculiar shaped bodies with a roughly horizontal central portion (the flat), and inclines falling away in all directions from the flat giving the deposit the shape of an inverted dish or basin. Runs are irregular bodies caused by the filling of irregular solution cavities along joints. Openings are solution cavities at the intersection of two or more joints or crevices.

The ore minerals are galena (lead sulphide), zinc blende or sphalerite (zinc sulphide), and marcasite (iron sulphide). With these calcite (calcium carbonate) is usually associated. Galena and zinc blende are the most common ore minerals of lead and zinc.

The theories regarding the origin of these deposits may be divided into two main groups: the hydrothermal,

and the lateral secretion theories. Hydrothermal ores are formed by hot ascending waters carrying in solution various metals which are deposited by precipitation as the temperature and pressure become less. The lateral secretion theory holds that the ore minerals, originally scattered in sparse distribution throughout the rock, have been dissolved by the circulating underground water and redeposited in greater concentration in some favorable locus.

Hydrothermal deposits are associated with vulcanism. As the liquid magmatic material works its way up from the earth's interior, it may be stopped in its upward movement and prevented from issuing at the surface as lava. In this case it will cool slowly and crystallize into a coarse grained igneous rock such as granite. All magmas contain water which is expelled during the late stages of crystallization and forced to seek an avenue of escape in the fissures and joints of the enclosing rock. Metallic constituents remain dissolved in this magmatic water and are carried along with it until the lowering temperature and pressure cause them to be precipitated. Thus ore deposits are often found in a peripheral distribution around the igneous rock from which the material originated. This type of arrangement led to the early recognition of the genetic relationship of ore deposits to the neighboring igneous rock.

At the time of Owen's survey of the lead and zinc region, it was commonly believed that all ore deposits were formed hydrothermally. Owen shared the popular view and for that reason he thought that igneous rocks must cut the sediments a short distance below the surface. No such intrusions have ever been found, in spite of the extensive mining operations and the numerous wells which have penetrated for considerable distances

into the rocks. Percival joined Owen in adherence to this view.

The lateral secretion theory assumes that the ores were dissolved from some other place or from a finely scattered condition by surface waters working under ground; and that they were carried to a locus suitable for deposition and concentration to form a mineable ore deposit. This is a secondary process as the ore minerals must first have been deposited in a disseminated state elsewhere.

There are two processes of deposition by underground waters: one by ascending waters in an artesian circulation, and the other by descending waters. By the former a concentration of flow must be effected through the removal of the barrier that impounds the water at a given point or over a limited area. If, for example, the water is held in a sandstone basin by an impermeable shale cover, and a portion of the shale near the center of the basin be removed, the water will escape at this opening and circulation will be from the margin of the basin toward this point. In this case, if an ore deposit is formed, the ore must come from below and be deposited in a higher position. In the case of descending water the metallic compounds migrate from near the surface downward, or laterally in a nearly horizontal plane.

Whitney was the first to advance the theory of the concentration of the lead and zinc ores by this process of lateral secretion. He believed that the ore minerals were precipitated from sea water in the sedimentary rocks in the course of their deposition on the sea floor. Hydrocarbons derived from the decay of organic matter on the sea bottom seemed to him to be sufficiently powerful reducing agents to precipitate small amounts

of the metallic compounds. In this manner, he believed, these compounds became finely scattered or disseminated throughout the sedimentary rock, whence later, meteoric or underground water dissolved the metals and precipitated them in certain openings, thus effecting the necessary concentration to produce commercial ore.

Chamberlin, building on the foundation laid by Whitney, constructed his theory regarding the formation of the ores—a theory which with only slight modifications has been adopted by most geologists up to the present time. According to him, at the time of deposition of the sediments in this region, the sea lapped against an irregular shore line which lay in the vicinity of Lake Superior and received sediment from streams draining the southern part of Canada. From this metal-rich region small quantities of lead, zinc, and iron were carried in solution by the streams that emptied into this great Paleozoic sea. Vegetable matter of various kinds, especially seaweed, abounded in the clear shallow waters. This vegetable matter, dying and sinking to the bottom, would be drifted along by ocean currents until it became lodged in depressions on the sea floor, where the velocity of the currents would be weakened. In this manner such depressions became the graveyards of plants, so that their remains were a great deal more plentiful in these places than elsewhere. The decay of the organisms produced a reduction of the metallic compounds from the sulphates or carbonates to the insoluble sulphides, thus causing the precipitation of minute particles of the ore minerals. Later, when the sea had retreated and left this region high and dry, and when it became exposed to the surface waters working down through the rock, there was concentration of the ores by solution and redeposition of the metallic

salts. This theory explained the presence of the ore bodies in depressions and the apparent association of ore with thick "oil rock" (which is the accumulated organic matter). More recently it has been found that the hydrocarbons of the "oil rock" are not due to seaweeds and fucoids, as Chamberlin believed, but to minute unicellular algæ.

Bain modified Chamberlin's theory somewhat, but he adhered closely to the main features.

Van Hise proposed that the metals were disseminated below, and the ascending artesian waters caused the ore concentration. He attributed the ascent of the waters in this region to the erosion of the overlying impervious Maquoketa shale, allowing the waters to escape where this shale cover had been removed. Probably the consensus of opinion at the present time is opposed to this idea.

G. H. Cox believes that the sulphides were originally disseminated in the Maquoketa shale. He finds by analysis that larger quantities of lead and zinc are present in this formation than in the surrounding rocks, and also that it is high in hydrocarbons, making it as effective a reducing agent as the "oil rock."

W. H. Emmons in 1929 revived the hydrothermal theory for these deposits. He reviews the geology of the lead, zinc, fluorite, and copper in the whole Mississippi valley. In the deposits outside of the Upper Mississippi valley there is abundant evidence in favor of his thesis, but this region has little except mineralogical similarity to place it in that category. The reversion to the hydrothermal theory for the origin of many deposits which were formerly considered to belong in the lateral secretion class, has recently been widespread, but until Emmons' attack the Wisconsin lead and zinc region re-

mained one of the last strongholds of the lateral secretionists. Whether it will weather the prospective attack by other adherents of the hydrothermal theory only time can tell. New scientific tools, by their application in the future, may either destroy or strengthen the brilliant analyses of Whitney and Chamberlin.

APPENDIX III

Business Farmers, 1880

(Productions valued at $2,000 or more)*

I GRANT COUNTY

Beetown:

Montgomery Miller, $2,000. 94 hogs. 458 bu. wheat.

William Gates, $2,150. 62 hogs.

Bloomington:

A. C. Tubbs, $2,000. 13 cattle. 101 hogs. 1,070 lb. wool.

W. R. Whellans, $2,000. 70 hogs.

John W. Graves, $2,100. 35 hogs. 450 bu. flaxseed.

William Pohle, $2,000. 60 hogs. 450 bu. flaxseed.

Boscobel:

None. Highest, $1,400.

Cassville:

L. M. and Samuel Okey, $2,500. 150 hogs.

Castle Rock:

None. Highest, $1,500.

Clifton:

William Andrew, $2,950. 24 cattle. 150 hogs. 1,000 bu. wheat.

W. H. Hondle, $2,500. 125 hogs. 700 bu. flaxseed.

Charles Bonson, $2,500. Sold 28 cattle. 250 bu. flaxseed.

William Allen, $2,000. 55 hogs. 780 bu. wheat.

F. M. Hartsook, $2,500. 170 hogs. 440 bu. flaxseed.

Hugh Livingston, $3,000. 20 cattle. 60 hogs. 400 bu. wheat. 400 bu. flaxseed.

John Hunter, $2,200. Sold 14 cattle. 60 hogs.

George Allen, $2,300. 12 cattle. 55 hogs. 218 bu. flaxseed.

Joseph and John Biddick, $3,000. Sold 22 cattle. 125 hogs. 800 bu. flaxseed.

Sanford Millard, $2,200. Sold 13 cattle. 125 hogs. 170 bu. wheat.

John McChinans, $2,000. 85 hogs. 927 bu. wheat.

J. P. Rundell, $2,500. 40 cattle. 160 hogs. 280 bu. flaxseed.

Ellenboro:

Benjamin Edge Sr., $2,600. 8 cattle. 26 hogs. 300 bu. wheat.

Fennimore:

John W. Varell, $7,000. 76 cattle. 32 hogs.

Fred Rector, $2,000. 53 hogs. 400 bu. wheat. 200 bu. flaxseed.

Jonathan Walk, $2,200. 100 hogs.

Conrad Knapp, $2,000. 95 hogs. 500 lb. wool. 320 bu. wheat.

Fred Neiman, $2,200. 177 hogs. 280 bu. wheat. 110 bu. flaxseed.

August Neiman, $2,500. 32 cattle. 60 hogs. 240 bu. flaxseed.

Herman H. Wefel, $3,000. 20 cattle. 150 hogs. 240 bu. peas.

G. Henry Horton, $2,400. 14 cattle. 200 hogs.

Charles Graezer, $2,300. 85 hogs. 775 bu. wheat.

George Kreul, $2,500. 34 hogs. 610 bu. wheat.

J. Baumgartner, $2,000. Cattle. 35 hogs. 667 bu. wheat.

John Montieth, $2,000. Cattle. 360 bu. wheat. 300 bu. flaxseed.

* Numbers following statement of aggregate production value indicate some of the money crops tending to justify the estimate. Hay, corn, and oats, usually fed out on the farm, are rarely mentioned save when the totals are quite unusual.

William Gillman, $2,200. 95 hogs. 150 bu. wheat. Bought and sold cattle.

Mathew Preston, $4,000. 86 cattle. 75 hogs. 300 bu. flaxseed.

John Dinsdale, $2,400. Cattle. 52 hogs.

Thomas Tormey, $6,000. 75 cattle. 150 hogs. 500 bu. flaxseed. (Tormey was a purebred shorthorn breeder—live stock valued at $4,500.)

Henry Dancliff, $2,800. Cattle. 120 hogs. 400 bu. flaxseed.

Dwight L. Parker, $9,000. 120 hogs. 700 bu. flaxseed. Bought and sold cattle.

William A. Griswold, $2,500. 75 hogs. Bought and sold cattle.

Glen Haven:

J. Barr, $2,000. Cattle. 360 bu. wheat. 125 bu. flaxseed.

John McCale, $2,000. Cattle. 100 hogs.

Samuel McIvor, $4,500. 75 cattle. 125 hogs.

Andrew Myers, $3,000. 65 hogs. 500 lb. wool.

John Ryan, $3,900. 40 cattle. 85 hogs. 220 bu. wheat. 225 bu. flaxseed.

Charles Heilman, $2,670. Cattle. 195 hogs. 240 bu. flaxseed.

Jacob Kuenster, $6,500. Cattle. 50 hogs. 2,507 lb. wool. 300 bu. wheat. 250 bu. flaxseed.

Harrison:

Albert Watt, $2,000. 90 hogs. 120 bu. rye. 200 bu. flaxseed.

Hazel Green:

H. Rice, $2,170. 53 hogs. 136 bu. wheat.

Patrick Doyle, $2,000.

William Ralph, $2,500. 26 hogs. 300 bu. wheat.

John Altenbergh, $2,500. Cattle. Hogs. Sheep.

Joseph Harris, $5,000. 70 cattle. 115 hogs. Sheep.

Thomas Scott, $2,000. 70 hogs. 140 bu. wheat.

George Birkett, $2,000. 65 hogs. 4,300 bu. corn.

William Andrew, $2,000. Cattle. Hogs.

Larkin Brothers, $2,000. Cattle. 22 hogs.

Dominican Sisters, St. Clara Academy, $4,000. 22 hogs.

Bennet Andrew, $2,500. 125 hogs. 120 bu. wheat.

(Hazel Green incomes average very high, probably majority over $1,000.)

Hickory Grove:

B. F. Davison, $2,000. 18 hogs. 600 bu. wheat.

Jamestown:

Benjamin Kilbourne, $2,000. (Income not demonstrated.)

Mary Murray, $2,000. (Income not demonstrated.)

Lancaster:

Louis Holloway, $3,100. 75 cattle. 100 hogs.

David Weaver, $2,030. 49 hogs. Milk and butter.

S. J. Griswold, $3,030. Sold 40 cattle. 187 hogs.

George Stewart, $3,000. 120 cattle. 110 hogs. 600 bu. wheat.

Val Borah, $2,500. 150 hogs. 100 bu. wheat.

Caroline Cox, $2,020. 240 hogs. 100 bu. wheat. 200 bu. flaxseed.

Joseph Bailey, $2,300. 180 hogs. 160 bu. wheat.

Ed McKinny, $4,000. 52 cattle. 200 hogs. 212 bu. wheat.

Thomas McDonald, $3,600. 52 cattle. 115 hogs.

Oscar Bidwell, $2,000. Cattle. 150 hogs. 546 bu. wheat. 320 bu. peas.

H. Bugbee, $2,000. Cattle. 100 hogs. 380 bu. wheat.

Charles Govier, $2,000. 100 hogs. 100 bu. wheat.

R. Morrell, $2,700. 100 hogs. 250 bu. wheat.

William Westing, $2,100. 35 cattle. 110 hogs.

J. N. Borah, $2,600. 60 hogs. 300 bu. flaxseed.

William Walker, $2,000. Cattle. 100 hogs.

LIBERTY:

No farm produced $2,000. Highest, $1,250. Nearly all below $1,000.

LIMA:

Elias Medley, $2,000. 35 hogs. 200 bu. flaxseed.

James Ashmore, $2,100. 14 cattle. 107 bu. wheat. 139 bu. flaxseed.

Eva Heiser, $2,000. 1,000 lb. butter. 450 bu. wheat.

George S. Whitcher, $2,600. 34 cattle. 1,450 gal. milk. 400 bu. wheat.

LITTLE GRANT:

Delos Abrams, $2,000. Cattle. 110 hogs.

High Varrell, $2,500. 109 hogs.

MARION:

Peter Bahel, $2,000. General farming and dairying.

Charles D. Blanchard, $3,000. 53 hogs. 370 bu. wheat.

Paul Welner, $2,020. Cattle. 26 hogs. 635 bu. wheat.

MILLVILLE:

Two out of 35 farms made more than $1,000:

Daniel McKey, $1,267.

Patrick Smith, $1,725.

MOUNT HOPE:

One farm out of 115 made $2,000:

William Murphy, $2,000. 400 bu. wheat. 400 bu. potatoes. General farming.

MOUNT IDA:

John Batham, $2,171. 67 hogs.

Samuel Borah, $3,700. 140 hogs. 700 bu. wheat.

Silas Jones, $2,150. 100 hogs.

Amos Frey, $2,100. 130 hogs.

Robert Jones, $2,205. 109 hogs.

Charles Smith, $2,282. 145 hogs.

Peter Cameron, $2,942. 117 hogs.

Aratus Hough, $2,300. 90 hogs.

Gottlieb Wehrle, $2,090. 1,700 lb. butter. 150 bu. flaxseed.

William Graham, $4,519. 19 cows. 67 cattle. 82 hogs. 990 lb. wool.

Harry Batham, $2,040. 28 cattle. 100 hogs. 250 bu. flaxseed.

MUSCODA:

Farms number 92. No income as high as $2,000. Highest, $1,700.

PARIS:

John Splinter, $2,360. 30 hogs. 4,000 bu. corn.

PATCH GROVE:

George W. Pike, $3,200. (No evidence of sources.)

N. J. and S. A. Hatch, $4,300. 200 hogs. 1,700 lb. butter.

John Lewis, $2,400. 16 cattle. 85 hogs. 3,000 lb. cheese. 216 bu. wheat.

Andrew Wilson, $2,200. 50 hogs. 170 sheep.

John Woffenden, $2,270. Sold 25 cattle. 58 hogs.

Edward Garside, $2,275. Cattle and hogs.

James Donnelly, $3,100. 30 cattle. 25 hogs. 2,500 gal. milk.

Moses B. Lewis, $2,590. 85 hogs. 180 bu. wheat.

James Hicklin, $3,400. 30 hogs.

William Humphrey, $4,450. 160 hogs. 700 bu. wheat.

John Anderson, $2,260. (Insufficient proof.)

James A. Davis, $2,350. 120 hogs. (In the above town, Patch Grove, on the Prairie, out of 104 farms, 12 made incomes of $2,000 or over, 5 being $3,000 or over, and 2 being $4,000 or over. The highest was $4,450.)

PLATTEVILLE:

Joseph Robinson, $2,500. 100 hogs.

William Prussing, $2,000. 100 hogs.

George C. Huntington, $2,500. 130 hogs.

George R. Huntington, $3,000. 200 hogs.

Robert Chapman, $2,000. 60 hogs.

Thomas Robison, $2,000. 100 hogs.

Charles Roseleib, $2,000. 50 hogs. 240 bu. wheat.

William J. Robison, $2,500. 500 bu. barley.

Henry Holzer, $2,000. 20 hogs. (Income not demonstrated.)
C. A. Loveland, $2,500. 115 hogs.
Anson Bennett, $2,800. 50 hogs.
Frank Huntington, $4,800. 60 hogs.
Francis Booth, $2,000. 130 hogs.
George Huntington Sr., $3,500. 50 hogs. 200 bu. barley.
William Nichols, $2,500. 61 hogs.

POTOSI:
George D. Utt, $2,000. 95 hogs.
David D. Utt, $2,500. 85 hogs.
German Walker, $2,000. 40 hogs. 230 bu. wheat.
Phineas Walker, $2,000. 30 hogs. 474 lb. wool.
Nicholas Bonn, $2,000. 10 cattle. 28 hogs.
Jabez Hurd, $2,400. 69 hogs. 151 bu. wheat.
Joseph Klein, $2,800. 43 hogs.
Joseph Bluemer, $2,500. 20 hogs. Wheat. Wine.

SMELSER:
D. and J. Harms, $2,600. Sold 33 cattle. 70 hogs. 270 bu. barley.
David Walker, $2,034. 350 bu. wheat. Sold hogs and cattle.
F. Johns, $2,000. 50 hogs. 800 bu. wheat.
Simon Harker, $2,108. Cattle. 45 hogs.
William Dent, $2,820. 50 hogs. 200 bu. wheat. 500 bu. flaxseed. (Total number of farms, 135.)

WATERLOO:
Largest income, $1,697. Number of farms, 171.

WATTERSTOWN:
Largest income, $1,819. Number of farms, 86.

WINGVILLE:
No income as high as $2,000. Highest, $1,900. 147 farms.

WOODMAN:
No farm exceeded $1,000 income, though one, James Trainer, puts down $7,000, possibly by mistake for $700. Number of farms, 76.

WYALUSING:
Highest income, $1,650.

II IOWA COUNTY

ARENA:
William C. Whitt, $2,750. 60 hogs. 800 lb. wool. 200 bu. rye. 700 bu. wheat.
Robert McCutchin, $4,000. 25 cattle. 120 hogs. 1,800 bu. wheat.
Evan and Thomas Thomas, $2,100. 11 cattle. 39 hogs. 750 bu. wheat.
John M. Wilson, $2,000. 60 hogs. 600 bu. wheat.
William E. Rowe, $2,000. 18 cattle. 40 hogs. 350 bu. wheat.
Thomas Jones, $2,000. 40 hogs. 600 bu. wheat.
William Caldwell, $2,500. 30 hogs. 280 bu. wheat.

CLYDE:
None. Highest, $1,800.

DODGEVILLE:
John Blatz, $2,150. 14 cattle. 92 hogs. 1,200 bu. wheat. 400 bu. flaxseed.

EDEN:
J. B. Johnson, $2,000. 100 hogs. 500 bu. wheat.
John Billings, $2,000. 115 hogs. 430 bu. wheat. 500 bu. flaxseed.

HIGHLAND:
Daniel Jones, $2,300. 40 hogs. 650 bu. wheat. 125 bu. flaxseed.
Bridget Kennedy, $2,350. 8 cattle. 14 hogs. 400 bu. wheat. 900 bu. flaxseed.
Anton Imhoff, $2,000. 57 cattle. 110 hogs. 600 bu. wheat.

LINDEN:
Robert Osborne, $2,000. 30 cattle. 90 hogs. 100 bu. wheat. 125 bu. flaxseed.
Robert and William Vial, $2,000. 100 hogs. 240 bu. flaxseed.
Edmund Baker, $2,530. 157 hogs. 375 bu. wheat. 287 bu. flaxseed.
W. H. and J. W. Baker, $2,377. 20 cattle. 45 hogs. 150 bu. wheat. 345 bu. flaxseed.

Henry Sampson, $2,028. 45 hogs. 200 bu. wheat.

William Jewell, $2,380. 90 hogs. 100 bu. flaxseed.

Hugh Hughes, $2,000. 50 hogs. 700 bu. flaxseed.

Charles Callard, $2,570. 26 hogs. 1,190 lb. wool. 120 bu. wheat. Stock feeder.

George Harker, $2,400. 70 hogs. 275 bu. wheat. 115 bu. peas. 160 bu. flaxseed.

Francis Baker, $2,416. 15 cattle. 125 hogs. 250 bu. wheat. 200 bu. flaxseed.

John Brent, $4,000. 30 hogs. 700 lb. wool. 350 bu. wheat. 180 bu. flaxseed. Stock feeder.

Simon Harker, $2,200. 160 hogs. 260 bu. wheat. 213 bu. flaxseed.

William H. Penhallegan, $3,050. 50 hogs. 3,125 gal. milk.

Joseph Baker, $2,000. 34 hogs. 300 bu. wheat.

John Parsons, $2,100. 35 hogs. 6,000 gal. milk. 1,000 lb. wool. 150 bu. wheat.

John Cawley, $2,000. 14,000 gal. milk. 600 lb. wool. 180 bu. wheat.

Nicholas Thomas, $2,835. 50 hogs. 4,000 gal. milk. 900 lb. wool. 550 bu. wheat. 200 bu. flaxseed.

Nicholas Jewell, $2,700. 50 hogs. 1,200 lb. wool. 300 bu. wheat. 450 bu. flaxseed.

Joseph Hallam, $2,235. 100 hogs. 1,050 lb. wool.

MIFFLIN:

Mrs. Ann Clayton, $2,300. 48 cattle. 38 hogs.

Richard Rundell, $2,050. 165 hogs. 300 bu. flaxseed.

George Thomas, $2,100. 85 hogs. 300 bu. flaxseed.

R. Biddick, $2,300. 12 cattle. 275 hogs. 300 bu. flaxseed.

Charles Livingston, $3,000. 13 cattle. 161 hogs. 160 bu. flaxseed.

William T. Kaife [Schaife?], $3,800. 18 cattle. 70 hogs.

John Ellsworth, $2,000. 95 hogs. 110 bu. flaxseed.

Jacob Frankl, $3,000. 30 hogs. 200 bu. flaxseed. Stock feeder.

H. P. Rundell, $2,000. 90 hogs. 270 bu. wheat. 200 bu. flaxseed.

Oliver P. David, $2,300. 80 hogs. 300 bu. wheat. Stock feeder.

Frank Bonson, $3,000. 100 hogs. 300 bu. wheat. 750 bu. flaxseed. Stock feeder.

William Thomas, $2,700. 40 hogs. 200 bu. wheat. 280 bu. flaxseed.

Godfrey Lindaur, $2,800. 100 hogs. 300 bu. flaxseed. Stock feeder.

P. T. Stevens, $2,800. 20 hogs. 600 bu. flaxseed.

John Carhart, $2,500. 60 hogs. 540 bu. flaxseed. Stock feeder.

Gilbert Barris [Bareis?], $5,400. 200 hogs. 450 bu. wheat. 450 bu. flaxseed. Stock feeder.

John Carpenter, $2,100. 50 hogs. 120 bu. wheat. 470 bu. flaxseed. Stock feeder.

C. S. Millard, $3,570. 19 cattle. 75 hogs. 255 bu. wheat. 660 bu. flaxseed.

Willis and Sons, $2,260. 35 hogs. 1,200 bu. barley. 160 bu. wheat.

Jenkins and Clark, $5,000. 44 cattle. 17 hogs. 500 bu. wheat.

George Alton, $2,720. 18 hogs. 125 bu. wheat. Stock feeder.

Cephas Cushman, $2,100. 20 hogs. 170 bu. wheat. 270 bu. flaxseed. Stock feeder.

Hiram A. Rundell, $2,010. 60 hogs. 115 bu. wheat. 290 bu. flaxseed. Stock feeder.

Alonzo Cushman, $2,050. 45 hogs. 700 bu. flaxseed.

James C. Kirkpatrick, $3,880. 40 hogs. 350 bu. wheat. 900 bu. flaxseed. Stock feeder.

William Jones, $2,050. 12 hogs. 250 bu. wheat. 200 bu. flaxseed. Stock feeder.

David D. Davis, $2,210. 10 hogs. 300 bu. wheat. 100 bu flaxseed. Stock feeder.

John Ellsworth, $2,120. 70 hogs. 300 bu. wheat. Stock feeder.

James Hird, $2,550. 29 hogs. 625 bu. wheat. 260 bu. flaxseed. Stock feeder.

Mineral Point:

James Spensley, $2,000. 450 bu. wheat. Stock feeder.

John Collins, $2,500. 85 hogs. 1,200 bu. wheat. 140 bu. flaxseed.

John and Calvert Spensley, $3,200. 70 hogs. 420 bu. wheat. Stock feeders.

B. Spellman, $2,000. 60 hogs. 200 bu. buckwheat. 350 bu. flaxseed.

William B. Parkinson, $2,580. 18 hogs. 800 bu. flaxseed.

City of Mineral Point:

John Ross, $4,170. Stock feeder. (Crop not given.)

Hugh Philip, $2,200. Cattle. Hogs. Sheep. 1,000 bu. wheat.

James Hutchinson, $2,024. Cattle. Hogs. Sheep. 600 bu. wheat. Stock feeder.

John and Calvert Spensley, $3,900. 500 bu. wheat. Stock feeders.

Moscow:

Ole S. Olson, $2,000. 12 hogs. 150 bu. wheat. Stock feeder.

Pulaski:

John Gallagher, $2,400. 70 hogs. 600 lb. wool. 200 bu. wheat. Stock feeder.

Ridgeway:

Robert Jones, $2,500. 25 cattle. 130 hogs. 600 bu. wheat.

Evan Jones, $3,000. 30 cattle. 80 hogs. 300 bu. wheat.

Edward Theobald, $2,000. 3,000 lb. butter. 17 hogs. 160 bu. wheat.

John Malone, $2,000. 23 hogs. 3,000 lb. wool. 740 bu. wheat. Stock feeder.

Waldwick:

James Jackson, $2,000. 30 hogs. 650 lb. wool. 155 bu. wheat. 42 bu. flaxseed. Stock feeder.

Thomas Gallagher, $2,100. 55 hogs. 324 bu. wheat.

Ryley and Logue, $2,510. 32 hogs. 200 bu. wheat.

Thomas Gribble, $2,550. 567 bu. wheat. 110 bu. flaxseed.

Charles Gant, $2,630. 11 cattle. 24 hogs. 108 bu. wheat. 420 bu. flaxseed.

Richard Jackson, $2,000. 21 hogs. 600 bu. flaxseed. Stock feeder.

Daniel and Andrew Danan & Co., $2,370. Cattle. Hogs. Sheep. 283 bu. wheat.

Wyoming:

T. L. Jones, $2,100. 20 hogs. 1,500 lb. butter. 150 bu. wheat.

James L. Jones, $2,500. 38 hogs. 1,050 bu. wheat.

William Ward, $2,425. 51 hogs. 600 bu. wheat.

L. and R. L. Jones, $2,500. 16 hogs. 300 bu. wheat. Stock feeders.

Clark Hickox, $2,200. 7 cattle. 60 hogs. 1,000 lb. butter. 400 bu. wheat.

James T. Bernard, $3,000. 50 hogs. 1,200 lb. butter. 600 bu. wheat.

Henry M. Lerake, $2,500. 39 hogs. 1,600 lb. butter. 290 bu. wheat.

III LAFAYETTE COUNTY

Argyle:

Michael Collentine, $2,720. 13 cattle. 40 hogs. 600 lb. wool. 333 bu. wheat.

A. J. Anderson, $2,200. 32 cattle. 90 hogs. 420 lb. wool.

Mrs. Ann Poff, $4,796. 45 cattle. 125 hogs. 60 bu. wheat. 120 ton hay.

Wiggins and Kepler, $2,000. 75 hogs. 240 bu. flaxseed.

Benjamin Stephenson, $2,000. 29 hogs. 140 bu. wheat. 315 bu. flaxseed.

John Penneston, $2,000. 35 hogs. 200 lb. wool. 163 bu. flaxseed.

William Aller, $2,000. 62 hogs. 300 bu. flaxseed.

Thomas Lancaster, $2,000. 93 hogs. 116 bu. wheat.

H. D. Rodgers, $2,400. 12 cattle. 105 hogs.

Ole Gunderson, $2,000. 6 cattle. 35 hogs. 200 bu. wheat.

Henry Sargent, $2,000. 22 cattle. 80 hogs.

John Nelson, $2,000. 21 cattle. 35 hogs. 250 bu. wheat.

Belmont:

William Foley, $2,133. 34 hogs. (Crop not given.)

Allen Kies, $5,550. 210 hogs. 240 bu. wheat. 840 bu. flaxseed.

William Stephens, $3,000. 21 cattle. 250 hogs. 225 bu. wheat.

Albert Kies, $2,385. 107 bu. clover seed. 120 hogs. 200 bu. flaxseed.

Henry Hines, $3,150. 30 hogs. (Crop not given.)

Hans Speth, $2,500. 6 cattle. 120 hogs. 300 bu. flaxseed.

John Speth, $5,000. 18 cattle. 300 hogs. 1,200 lb. butter. 600 bu. rye. 80 bu. wheat. 60 bu. flaxseed.

Henry Stimhoff, $3,000. 115 hogs. 495 bu. flaxseed.

Henry Wise, $3,400. 100 hogs. 6,800 bu. oats.

D. Engleke, $3,500. 80 bu. clover seed. 30 cattle. 7,000 bu. corn. 400 bu. rye. 250 bu. wheat.

William Mates, $2,500. 120 hogs. 300 bu. flaxseed.

N. Steffen, $2,175. 86 bu. clover seed. 66 hogs. 2,200 bu. oats. 220 bu. wheat. 280 bu. flaxseed.

Edwin Johnson, $3,250. 40 cattle. 140 hogs.

M. V. Burris, $3,100. 85 hogs. 1,150 bu. wheat.

Benton:

William Calvert, $2,000. 11 cattle. 40 hogs. 305 bu. wheat.

Christopher Byrne, $2,000. 140 hogs. 160 bu. wheat. 140 bu. flaxseed.

John Jenkins, $2,500. 85 hogs. 300 bu. wheat.

Michael Faherty heirs, $2,700. 60 cattle. 200 bu. flaxseed.

George Carr, $2,200. 30 cattle. 80 hogs. 200 bu. wheat.

William S. Gray, $2,000. 75 cattle. 50 hogs. 600 lb. wool. 100 bu. wheat.

Herman Grotkin, $2,000. 12 cattle. 56 hogs. 500 bu. wheat. (Here is a group of 10 farms which is about the poorest group encountered. Tillable areas run: 16, 2, 4, 1, 24, 3, 4, 2, 2, and 6 acres. Valuations are $3,000, $2,000, $4,000, $250, $1,500, $300, $700, $300, $250, $200. Production incomes run from $50 to $400.)

Charles A. Strong, $4,520. 71 cattle. 75 hogs.

Thomas Bainbridge, $4,000. 30 hogs. 1,500 lb. wool. 1,400 bu. wheat.

Blanchard:

William Dearth, $2,400. 48 cattle. 90 hogs. 125 bu. wheat.

Alvin Blanchard, $4,860. 40 cattle. 56 hogs, 1,500 lb. butter. 400 lb. wool. 400 bu. wheat. 290 bu. flaxseed.

Darlington:

William Wilson, $2,000. 100 hogs. 2,000 lb. butter. 450 lb. wool. 200 bu. wheat.

J. Mathews, $3,000. Cattle. Hogs. 60 tons hay.

Thomas Sanders, $2,000. 40 bu. clover seed. 120 hogs. 1,700 lb. butter. 1,200 lb. wool. 500 bu. flaxseed.

Joseph Minaam, $2,960. 100 hogs. 3,000 lb. cheese. 160 bu. wheat. 220 bu. flaxseed.

W. Price, $2,000. 180 cattle. (Crop not given.)

Elk Grove:

Samuel Arthur, $3,200. 24 cattle. 60 hogs.

Henry Sheel, $2,595. 10 cattle. 80 hogs.

T. A. Goodale, $2,800. 8,000 bu. corn.

William Hazzard, $9,000. 14 hogs. 786 lb. wool. 2,800 bu. corn. 128 bu. wheat. Discrepancy with farm valued at $10,000 and stock at $1,650.

William White, $2,110. 35 hogs. 170 bu. wheat. 170 bu. flaxseed.

Joseph Bratton, $2,054. 75 hogs. 100 bu. rye. 200 bu. wheat. 304 bu. flaxseed.

FAYETTE:

Jacob Cline, $2,927. 20 cattle. 60 hogs. 850 lb. wool.

William Stillwell, $2,600. 18 cattle. 65 hogs. 3,000 bu. corn.

B. F. Buckmaster, $2,455. 54 hogs. 2,500 bu. corn. 90 bu. wheat.

Ransom Phelps. Credited with income of $3,883 from his $12,000 farm. Doubtful. May have produced more than $2,000 for he made 210 tons hay, sold 50 cattle after buying 75 head. Had 3,000 bu. corn, 1,000 bu. oats, 100 bu. wheat, 100 bu. flaxseed.

Irving Curry, $2,200. 18 cattle. 90 hogs.

John Finley, $2,600. 45 cattle. 50 hogs. 1,700 lb. butter. 330 bu. wheat.

T. J. Van Matre, $3,635. 200 hogs. 600 bu. flaxseed.

Thomas Reynolds, $2,190. 124 hogs. 988 bu. flaxseed.

GRATIOT:

Rufus J. Welty, $2,000. 44 bu. clover seed. 20 hogs. 214 bu. wheat. 130 bu. flaxseed. Stock feeder.

S. Gray, $2,000. 45 bu. clover seed. 54 hogs. 160 bu. barley. 147 bu. wheat. 117 bu. flaxseed. Stock feeder.

M. Linch, $3,000. 70 bu. clover seed. 12 cattle. 120 hogs. 200 bu. flaxseed.

V. G. Farnham, $2,000. 40 bu. clover seed. 9 cattle. 21 hogs. 200 bu. barley. 130 bu. flaxseed. Stock feeder.

Annie Going, $2,500. 19 cattle. 170 hogs. 219 bu. barley. 300 bu. flaxseed.

J. Stan, $2,000. 13 cattle. 80 hogs. 242 bu. flaxseed.

Michael Doyle, $5,405. 79 cattle. 100 hogs. 105 bu. wheat. (Money made feeding cattle.)

Dave Stathony, $2,000. 16 cattle. 14 hogs. 115 bu. flaxseed.

William Tuttle, $3,110. 22 cattle. 150 hogs. 60 bu. wheat.

L. Dargin, $2,000. 20 cattle. 50 hogs. 320 bu. flaxseed.

Stephen Smith, $2,000. 125 hogs. 125 bu. wheat. 600 bu. flaxseed.

James Forman, $3,000. 36 cattle. 75 hogs. 300 bu. wheat.

D. E. Dull, $2,500. 13 cattle. 20 hogs. 1,300 lb. butter. 320 bu. rye.

Jonas Doring, $2,000. 12 cattle. 40 hogs. 150 bu. barley. 250 bu. wheat. 250 bu. flaxseed.

Jeremiah Chappman, $2,500. 40 cattle. 240 hogs. 130 bu. buckwheat. 630 bu. flaxseed.

Francis Campbell, $2,940. 2,205 lb. wool. (Crop not given.)

Annie Opie, $3,000. 40 cattle. 40 hogs. 200 bu flaxseed.

E. C. Slothower, $3,000. 27 cattle. 100 hogs. 160 bu. wheat. 250 bu. flaxseed.

Henry Smith, $2,000. 20 hogs. 1,900 lb. butter. 112 bu. wheat. 135 bu. flaxseed.

John Brannan, $2,000. 30 hogs. 475 bu. barley. 600 bu. wheat. 150 bu. flaxseed.

John Thompson, $2,000. 9 cattle. 50 hogs. 60 bu. wheat.

KENDALL:

Charles Rider, $2,500. 6 cattle. 60 hogs. 1,350 lb. butter. 400 bu. flaxseed.

G. Libecky, $2,000. 4 cattle. 29 hogs. 350 bu. rye. 135 bu. wheat. 160 bu. flaxseed.

William Hatfield, $2,500. 38 cattle. 80 hogs. 100 bu. flaxseed.

Edward Renkell, $2,000. 9 cattle. 100 hogs. 200 bu. flaxseed.

Barney Beaumont, $2,000. 58 hogs. 1,800 lb. butter. 400 bu. flaxseed.

MONTICELLO:

D. W. Dimmick, $2,500. 67 hogs.

Richard Levitt, $2,000. 35 bu. clover seed. 29 cattle. 70 hogs. 1,280 lb. wool. 150 bu. flaxseed.

Christian Hoffele, $2,000. 13 cattle. 75 hogs. 410 lb. wool. 200 bu. flaxseed.

Thomas Wiley, $2,000. 23 cattle. 70 hogs. 350 bu. flaxseed.

NEW DIGGINGS:

Matthew Robinson, $2,500. 30 bu. clover seed. 12 cattle. 40 hogs. 449 bu. wheat.

Thomas Bainbridge, $2,075. 1,000 bu. wheat. (Hardly demonstrated.)

Isaac Bird, $2,410. 16 cattle. 32 hogs. 1,100 lb. butter. 400 bu. wheat. 180 bu. flaxseed.

SEYMOUR:

Andrew Kolb, $2,000. 36 cattle. 18 hogs. 120 bu. wheat. 400 bu. flaxseed.

Frank Dunlavy, $2,000. 15 cattle. 100 hogs. 320 bu. flaxseed.

Thomas and James Raw, $2,000. 17 cattle. 30 hogs. 2,000 lb. butter. 1,500 lb. wool.

James Morgan, $2,000. 50 hogs. 500 bu. flaxseed.

M. Morgan, $3,000. 200 hogs. 2,000 lb. butter. 150 bu. wheat. 300 bu. flaxseed.

William Bell and Bros., $2,000. 35 cattle. 40 hogs. 2,000 lb. butter. 900 lb. wool. 175 bu. wheat. 400 bu. flaxseed.

James Huntington, $2,660. 10 cattle. 60 hogs. 1,000 lb. butter. 125 bu. flaxseed.

Edward McCornish, $2,800. 175 hogs. 200 bu. flaxseed. 2,000 lb. butter.

Thomas Vickers, $3,000. 25 cattle. 69 hogs. 200 bu. wheat. 175 bu. flaxseed.

Patrick Morgan, $2,000. 8 cattle. 100 hogs. 600 bu. flaxseed.

SHULLSBURG:

J. W. Blackstone, $2,000. 70 hogs. 600 bu. flaxseed.

James Ernest, $3,000. 80 hogs. 1,400 lb. wool.

Joseph Hutchinson, $2,000. 17 cattle. 50 hogs. 2,450 lb. wool.

Henry Proctor, $2,000. 50 cattle. 39 hogs.

Eliza Townsend, $3,000. 50 hogs. 160 bu. rye. 80 bu. wheat. 150 bu. flaxseed.

Joseph Copeland, $2,000. 50 hogs. 6,000 bu. oats. 60 bu. flaxseed.

John Quigley, $3,000. 30 cattle. 100 hogs. 1,400 lb. wool.

Jacob Thomas, $2,500. 14 cattle. 50 hogs.

WAYNE:

Nelson La Due, $2,800. 35 hogs. 550 bu. wheat. 200 bu. flaxseed.

B. F. Watson, $2,600. 25 cattle. 120 bu. wheat. 120 bu. flaxseed.

J. P. Rockwell, $2,000. 11 cattle. 1,500 lb. butter. 163 bu. flaxseed.

WHITE OAK SPRINGS:

Theodore E. Blackstone, $2,165. 100 hogs. 130 bu. wheat. 640 bu. flaxseed.

W. and L. O'Brien, $2,084. 7 cattle. 150 hogs.

S. H. Scales. $5,280. 60 hogs. 1,056 lb. wool. 400 bu. wheat.

Joseph Blackstone, $4,600. 25 cattle. 60 hogs. 2,900 gal. milk. 1,280 lb. wool. 170 bu. wheat.

William Walton, $4,000. 33 cattle. 30 hogs. 3,800 gal. milk. 650 bu. wheat.

Edward White, $3,195. 17 cattle. 200 sheep. 567 lb. wool. 62 bu. wheat (from 1¼ acres).

Edward March, $2,454. 19 hogs. (Not justified.)

Arthur Jeffery, $2,400. 22 cattle. 32 hogs. 1,000 gal. milk. 100 bu. wheat. 500 bu. flaxseed.

Henry Beckwith, $2,268. 15 hogs. 145 bu. wheat. 660 bu. flaxseed.

Willow Springs:

Daniel McHatton, $2,480. 38 hogs. 40 bu. wheat. 40 bu. flaxseed.

Wiota:

Samuel Thompson, $2,500. 23 cattle. 55 hogs. 800 lb. butter. 70 bu. flaxseed.

John Leece, $2,000. 11 cattle. 40 hogs. 1,200 lb. butter. 200 bu. flaxseed.

George W. Stevenson, $3,000. 60 bu. clover seed. 35 cattle. 12 hogs. 225 bu. rye.

APPENDIX IV

The Service Area of Montfort

A Study in Landscape Types in Southwestern Wisconsin

VERNOR C. FINCH

Montfort, Wisconsin, is one of a series of villages which stands upon the crest of the Galena-Trenton escarpment in the southwestern part of the state. The eastern approach to Montfort is over the old military road which, together with the Madison division of the Chicago and Northwestern Railroad, binds these villages together and gives them outlet. The landscape bordering this approach is not peculiarly impressive. Upon the south are level farm lands whose rectangular fields of corn, oats, and hay, modest homes and large barns are distinctly of corn belt type. On the north appears a gently rolling surface where fields of less regularity and a more persistent fringing of timber give faint notice of different conditions. The full degree of contrast is not realized until the observer passes the end of one of the tributary valleys descending northward to Blue River where spring-fed brooks have cut through all of the formations to the Cambrian sandstone. These valleys are hardly visible to an oblique view across the escarpment but have a detail of rugged beauty to which no photograph does justice.

At Montfort the highway and the railway intersect the main village street at the head of such a valley. Here beside the railway station are the establishments of the dealers in lumber, coal, petroleum, feed, and live stock. These are the only merchants in the community whose business requires the movement of goods in carlots. Farther north the main street is bordered by residences, comfortable but not new. Down a steep incline a quarter mile from the station, in the broad bottom of the ravine, is the heart of the village, the usual merchandising establishments and offices of a small town. Here in 1827 the first settler, having driven from Galena, halted his team for water, and finding both a spring and evidences of lead ore in the side of the ravine, he remained. The site of the spring still is preserved beside the street. Looking back from the village four corners one sees the slope, down which the ox cart creaked, and the brick structures which have replaced the cabins of the miners who flocked to the unearthing of the ores. From many directions they came and "gophered" for lead, New Englanders, Irish immigrants, and Cornish miners from the Galena settlements. Certain hillside pastures east of the village still bear dozens of the shallow pits dug in this period. For a quarter century or more the lead industry flourished while agriculture languished. Furnaces were built, charcoal was burned from the valley timbers, and ox carts creaked up the hill and through the prairies and timbers of the back slope of the cuesta with pig lead for the Galena market. By the late 1860's the worked-out surface lead deposits had become unsatisfactory as a basis of community support and mining was nearly replaced by agriculture. At this time the utilization of the zinc ores, associated with the lead, gave new life to

the mining industry. Larger capital investment encouraged the sinking of deeper shafts and the installing of machinery whose ruined foundations and piles of tailings still scar the landscape and in one instance serve as a source of road metal in a driftless area. The deposits of mineral proved small when compared with those of other localities and by the opening of the present century all had ceased operation and the mineral stage in Montfort economy was past.

In the meantime agriculture had developed, newcomers of German, Bohemian, and Norwegian origin had been added to the population complex. Further stimulus came from the construction of a railway which in 1878 made its way from Galena following the narrow but level divide between the headwaters of the Platte and Pecatonica rivers. This service was subsequently augmented by the building of the Madison division which follows the crest of the escarpment and makes junction with the former about a mile southeast of the village where stand the locomotive coal hoist and water tower, rather than in the village itself. Indeed, so closely did the canny engineers make the curves of their railways conform to the crests of these two water-partings that on the twelve miles of railroad that come within the scope of this investigation there is not any bridge or culvert nor even any cut or fill of more than trivial size.

The Montfort service area as a whole is strictly agricultural. The farm income is derived in the main from live stock industries and principally from dairying. The village itself reflects this. The only manufacturing enterprise at present is a combined creamery and cheese factory which nestles in the ravine below the village where perennial springs afford an abundant supply of

water. This factory though small extends its influence far, in spite of the competition of three rural cheese factories in the territory. It employs but half a dozen men and contributes largely neither to the support of the village nor to the freights of the railway. It is estimated that more than half the village population of 600 is supported by retail merchandising. The largest establishment is a combined hardware and implement store. Other stores are of the usual village type, upon whose stocks of goods the transfer of patronage by automobile and by mail to larger cities has had a detrimental effect. Montfort of today does not wear the air of a vigorous prosperity.

Although the rural landscape about Montfort bears many common aspects throughout, there are also significant differences in population character and distribution, in type and location of farmsteads, in land use, in crop systems and animal industries. Most of these differences appear to be cultural adaptations to differences in natural environment, partly to differences of soil and drainage but principally to those of slope.

Because the two stream divides separate the three drainage basins in which the service area of Montfort is included, the railways which follow the divides serve well to partition the area into three somewhat unlike landscapes. The three streams have very different gradients. All three send tributaries to a common point at the railway junction, from which point the Blue River descends the cuesta 300 feet in the first three miles and 460 feet in the first ten miles, while the Pecatonica descends only 260 feet in ten miles. The gradient of the Platte is intermediate. An understanding of the geography of much of southwestern Wisconsin may be based upon the landscape forms characteristic of these three drain-

age basins. No more can here be done than to indicate some of the outstanding elements of the most markedly different landscapes. For this reason attention is directed to the contrast between the district at the headwaters of the Pecatonica, southeast of the village, and the Blue River district north of the village. Discussion of the third, or Platte River district, must be entirely omitted.

Southeast of Montfort the view is across the gently undulating surface of one of those islands of prairie which characterized the native vegetation of southern Wisconsin. Slight, indeed, is the dissection, 80.6 per cent of the surface has a slope of less than 3 degrees and only 0.2 per cent of the total exceeds 9 degrees. Almost exactly coincident in distribution with the gentlest slopes is the tilled land, 73.9 per cent of the total area. The rectangular fields of corn look prosperous and the cultivator exposes the dark color of the well drained Marshall silt loam soil of this prairie upland. Corn occupies more of the surface than any other one crop, 21.8 per cent of the total area and 29.6 per cent of the tilled land. Alternating with corn and occupying almost the same (31.2) per cent of the tilled land are fields of thrifty small grains, chiefly oats and barley, obviously in rotation. The other major crop is hay; timothy, clover with an occasional field of alfalfa, soy beans, or sudan grass. These also are of good quality save where the drifting of winter snows on these windswept prairie uplands has bared the crop to ice storms and to desiccation. The combined area in hay and pasture in rotation (21.8 and 8.7 per cent respectively of the tilled land) equals that in corn or the small grains. Peas and sweet corn for canning are the only important cash crops and occupy only 6 per cent of the tilled land.

A canning factory at Cobb only one mile east of the district is located conveniently for the assembling of corn and peas both of which are well adapted to the dark upland soil and to this latitude. However, these crops are exacting in their labor requirements at harvest and not all farmers will submit to factory dictation, therefore the acreage tends to be small. Pea vines as harvested are bulky and perishable therefore vining machinery is established on convenient sites and farmers seldom haul more than a mile or two. From the viners the trays of shelled peas must move by automobile swiftly to the factory. For this reason the two viners in the prairie near Montfort are located on hard-surfaced roads.

In this district where only 19.4 per cent of the land exceeds 3 degrees in slope and where 73.9 per cent is actually tilled, it is probable that as much as 95 per cent is capable of tillage. That so much as 24.1 per cent is in permanent pasture is related (1) to the fact that the farms average large (190 acres) in proportion to the farm population (4.4 persons) and (2) to the large numbers of farm animals which require more summer pasture than can be supplied by pasture in the common rotation. Almost invariably permanent pastures occupy the shallow depressions of the upper valley ends which have slightly inferior drainage.

A few of the farmsteads appear upon the horizon half submerged in the shallow valleys where the advantage of spring water influenced the original choice of site. However, the majority of those which characterize this prairie district are located at irregular intervals upon the rectangular pattern of the highways. Many of the farmsteads were laid out in the day of cheap land and being physically unrestricted are large, the average be-

ing 3.9 acres. They include the numerous buildings typical of the older farmyards of the American Middle West; barns large and small, the silo and windmill, houses, some of which reflect a modified New England type of architecture, sheltered by coniferous windbreaks whose size testifies to many years of establishment. Some newer farmsteads with fewer barns, bungalow houses, and no windbreaks indicate a subdivision of some of the larger land holdings and an increasing intensity of farming, for land values in this district are high, the average assessed value being $111 per acre as compared with $61 in the Blue River district. Not all the farmsteads look well kept, for four out of ten are occupied by renters; these large fertile farms have many absent landlords. The names of the land owners reflect a predominance of American and German stock with but small infusion of the later Bohemian arrivals.

Certain contrasts may now be drawn which will serve to throw into relief the landscape forms of the more dissected Blue River district against those of the prairie district and to suggest some of the interrelationships involved in their interpretation.

First, it may be noted that only 42.2 per cent of the Blue River district is tilled, in contrast with 73.9 per cent in the prairie. Instead of 80.6 per cent level land, 21.8 per cent is level (0°-3°), 46.6 per cent is rolling (3°-9°), 19 per cent is rough (9°-15°), and 12.5 per cent is steep and rocky (over 15°). This region was all of it originally timbered with oak and hickory, much of it thin timber, and 23.2 per cent yet remains in timber, mainly the steeper slopes. The tilled fields lie principally on the peninsular projections of the upland between the northward flowing streams. The field pattern and the road pattern are not so rectangular as those of

the prairie, and some of the narrow uplands end in round-nosed fields. A small proportion of the tilled land lies on terraces developed in the St. Peters sandstone adjacent to the Blue River and many slopes of 3°-9°, and some exceeding 9°, are cultivated, since level land is limited in extent.

The rank of the tilled crops also reflects the dissection of the district and to some degree the presence of less productive soils such as the Knox silt loam, of forest origin, and its steep phase. Corn occupies about a quarter of the tilled land and small grains as much, but only 10 per cent of the total area instead of the 22 per cent found in the prairie. Hay occupies more than a third of the tilled land, while pasture in rotation is much less important than in the district of more level land. Cash crops in this rougher district are restricted to tobacco and that only in a small locality occupied by a Norwegian community.

Permanent pasture dominates the cultural landscape and occupies 54.4 per cent of the total area. Its relation to the natural landscape will be seen from its distribution for it is confined mainly to the bluffs and the narrow bottom lands of the streams. More than half of this pasture land is partly or wholly uncleared, 40.1 per cent being wooded, 24.9 per cent having brush or scattered trees and only 34.8 per cent being open grass pasture, in contrast with 88.7 per cent of this type in the prairie district.

The farms of the Blue River district average smaller than those of the prairie (165 cf. 190 acres), yet the farm population is slightly larger. The farmsteads are smaller also (2.4 cf. 3.9 acres), and in general they are not arranged upon the main highways. More commonly are they found upon a spring site in a valley head; upon

a terrace, accessible to both tilled land above and the pasture below; or upon the upland edge of a ravine where they are reached only by a short but difficult road up the bluff or by a long, poor private road through the fields on the ridge from the south. Only a few are in the valley bottoms. The best of these are in the middle portion of the Blue River bottoms where weaker rocks have permitted valley widening and terrace development.

The buildings of the farmsteads in this district also are generally fewer and smaller. The assessed valuation of improvements per farm averages $1,600 in contrast with $2,900 for those on the prairie. In the narrow part of the Blue River valley the landscape forms show more nearly pioneer conditions than any other locality in the Montfort area. Of the few farmsteads in that locality several have been abandoned and the small farms absorbed by the larger upland farms adjacent.

The names of the farmers in this district reveal a predominance of Bohemians, mainly of second generation, whose parents settled this less desirable land after 1870. They are hardworking people and generally own their farms, the percentage of tenancy being only 20 as compared with 40 on the prairie farms.

The farmers of both regions depend on live stock for their principal income but the relative numbers of the different types of farm animals reveal an adjustment to the use of the land and thus to the forms of the natural environment. First, the smaller farms and less tillable land of the Blue River district require the labor of fewer horses; 5.2 per farm cf. 6.4 per farm in the prairie, although tractors are more numerous in the latter district also.

Milk is the chief source of income in both districts. The prairie farmer milks on the average 16.3 cows and his rough-land neighbor 13.6. The form of milk disposal varies with location and the season but since there are four cheese factories within the two districts that use absorbs most of the milk produced. Not a few beef cattle are found in either district. The bluffs and bottom pastures of the Blue River serve for beef as well as dairy cattle. Indeed, several of the prairie farmers own from 40 to 160 acres of land in the Blue River district upon which to summer pasture cattle which are winter fed on the larger grain surplus of the home farm. The grain surplus of the prairie farm is even more evident when the number of hogs per farm in the two districts is compared, 34 in the rough land and 95 on the prairie. Sheep are not numerous in either district, but in the autumn some flocks of western lambs appear on the prairie farms to further utilize the grain surplus, pea silage, and the incidental forage of the harvested fields and meadows.

From these comparisons it is apparent that the prairie farmer has more "strings to his bow" than has he of the Blue River district, a fact that clearly has relation to forms in both the cultural and the natural landscapes.

TABLE I

District	Total Area	Slopes: Acreage, and Per Cent of Total Area, by Districts					Major Land Uses: Acreage, and Per Cent of Total Area, by Districts						Average Size of Farmsteads in Acres
	Acres		1 0°-3°	2 3°-9°	3 9°-15°	4 over 15°	Tilled Land	Permanent Grassland	Woodland (not pastured)	Idle Land	Minor Uses	Land in Farmsteads	
Cuesta Escarpment (Blue River)	13,389	Acres	2,929	6,242	2,546	1,672	5,646	7,286	191	44	7	214	2.4
		%	21.8	46.6	19.0	12.5	42.2	54.4	1.4	0.3	0.08	1.6	
Platte River	8,782	Acres	2,922	5,438	326	96	5,413	3,202	9	26	4	128	2.6
		%	33.3	61.8	3.7	1.1	61.7	36.4	0.1	0.3	0.07	1.4	
Prairie (Pecatonica River)	7,098	Acres	5,722	1,358	18	....	5,241	1,710	...	..	17	130	3.9
		%	80.6	19.2	0.2	....	73.9	24.1	...	..	0.2	1.8	
Village of Montfort	127	Acres	65	50	12	....	.....	.....	...	..	...	...	..
Total Area	29,396	Acres	11,638	13,088	2,902	1,768	16,300	12,198	200	70	28	472	..

Total estimated area, including roads and railways, 30,070 acres.

TABLE II

District		LAND IN TILLED CROPS Acreage, and Per Cent of Total Tilled Land Area and on Total District Area, by Districts					LAND IN PERMANENT GRASS Acreage, and Per Cent of Total Grassland Area and of Total District Area, by Grassland Classes and by Districts			
		Corn	Small Grains	Hay (in rotation)	Pasture (in rotation)	All Other Tilled Crops	Open	With Scattered Trees or Brush	Wooded	Cut for Hay
Cuesta Escarpment (Blue River)	Acres	1,298	1,543	2,022	270	531	2,537	1,811	2,922	16
	% of Major Use Area	22.9	27.0	35.9	4.8	9.4	34.8	24.9	40.1	0.2
	% of Total Dist. Area	9.7	11.5	15.1	2.1	3.8	19.0	13.5	21.8	0.1
Platte River	Acres	1,932	1,756	1,328	275	122	2,226	412	548	16
	% of Major Use Area	35.6	32.4	24.5	5.0	2.5	69.5	12.8	17.2	0.5
	% of Total Dist. Area	22.0	20.0	15.1	3.2	1.4	25.4	4.6	6.2	0.2
Prairie (Pecatonica River)	Acres	1,546	1,641	1,142	455	457	1,516	148	38	8
	% of Major Use Area	29.6	31.2	21.8	8.7	8.7	88.7	8.6	2.2	0.2
	% of Total Dist. Area	21.8	23.2	16.1	6.4	6.4	21.4	2.1	0.5	0.1

TABLE III

A PERCENTAGE CLASSIFICATION OF SELECTED LAND USES BY DISTRICTS, ACCORDING TO SLOPES OCCUPIED

District		Tilled Land				Corn Land				Permanent Grass				Woodland Pasture			
		Slope				Slope				Slope				Slope			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Blue River	%	27.9	64.4	7.5	0.2	32.7	62.5	4.7	0.1	18.6	31.8	27.9	21.7	3.1	22.9	30.1	43.8
Platte River	%	41.2	58.8	..	..	45.7	54.3	..	..	20.9	66.1	10.0	3.0	6.7	53.3	24.0	16.0
Pecatonica River ..	%	90.3	9.7	..	..	80.6	19.4	..	..	52.4	46.6	1.0	...	Insignificant Area			

APPENDIX V

Grant County—1860

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Germany	Ireland	Scandinavia	British America	France	Bohemia	Switzerland	Cuba	Italy	Holland	Spain	Belgium	Poland	Unknown
Beetown	271	175	94	37	3	..	26	19	..	7	2	..	..	..	..	..	..	..	..	2
Blue River	78	28	50	2	1	1	13	13	4	..	..	16	..	..	..	..	..	..	..	..
Boscobel	125	98	27	6	..	..	11	6	..	2	..	..	1	1	..	..	..	..	..	..
Cassville	170	59	108	17	..	..	73	8	1	5	2	..	2	..	..	..	..	..	..	3
Clifton	178	108	70	38	..	..	8	14	4	4	1	..	1	..	..	..	..	..	..	..
Ellenboro	130	91	39	18	..	..	8	9	..	3	1	..	..	..	..	..	..	..	..	..
Fennimore	250	176	73	17	3	..	25	11	12	4	..	..	1	..	..	..	..	..	..	1
Glen Haven	172	68	104	34	5	..	39	16	..	5	2	..	2	..	1	..	..	..	..	..
Harrison	170	93	77	27	..	..	27	16	1	2	2	..	2	..	..	..	..	..	..	..
Hazel Green	454	82	370	210	5	5	82	47	1	14	1	..	2	..	..	2	1	..	..	2
Hickory Grove	120	82	37	4	2	..	18	2	11	..	..	..	..	..	..	..	..	..	..	1
Jamestown	260	112	148	41	4	1	64	18	..	10	3	..	1	..	..	5	..	1	..	..
Lancaster	357	208	146	41	14	3	62	23	2	1	..	..	..	..	..	..	..	..	..	3
Liberty	125	48	77	8	5	..	52	11	..	1	..	..	..	..	..	..	..	..	..	..
Lima	163	118	45	13	3	2	6	13	1	2	4	..	1	..	..	..	..	..	..	..
Little Grant	106	45	61	40	6	..	1	12	1	1	..	..	..	..	..	..	..	..	..	..
Marion	94	62	32	9	1	..	16	2	2	2	..	..	..	..	..	..	..	..	..	..
Millville	206	125	80	17	8	..	7	42	1	5	..	..	..	..	..	..	..	..	..	1
Muscoda	130	67	63	4	..	1	37	4	1	1	6	5	3	..	..	..	..	..	1	..
Paris	120	64	56	14	3	..	37	..	..	1	..	..	1	..	..	..	..	..	..	..
Patch Grove	157	109	47	12	6	..	...	28	..	1	..	..	..	..	..	..	..	..	..	1
Platteville	231	84	147	59	3	2	54	29	..	..	..	..	..	..	..	..	..	..	..	..
Potosi	402	76	326	107	2	..	165	36	..	6	2	..	2	..	..	5	..	1	..	..
Smelser	202	100	102	48	1	..	31	15	..	4	2	..	1	..	..	..	..	..	..	..
Tafton	182	134	46	12	4	..	11	7	..	11	1	..	..	..	..	..	..	..	..	2
Waterloo	117	65	52	5	2	..	26	13	..	2	3	..	1	..	..	..	..	..	..	..
Watterstown	129	83	46	10	1	1	13	16	3	2	..	..	..	..	..	..	..	..	..	..
Wingville	123	79	44	13	4	..	13	6	3	2	1	1	1	..	..	..	..	..	..	..
Wyalusing	122	99	23	6	..	..	5	5	..	2	..	..	5	..	..	..	..	..	..	..

Iowa County—1860

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Germany	Scandinavia	British America	France	Ireland	Holland	Switzerland	Bohemia	Poland	Austria	Russia	Unknown
Arena	252	78	170	63	2	12	17	14	2	1	59	..	..	..	..	..	..	4
Clyde	113	61	52	2	1	..	4	8	3	..	34	..	..	..	..	..	..	..
Dodgeville	380	43	335	123	25	82	30	58	2	1	13	1	..	..	..	..	..	2
Highland	438	85	353	57	1	10	117	58	7	..	97	..	3	2	1	..	..	..
Linden	285	28	257	210	..	13	13	8	2	..	11	..	..	..	..	..	..	..
Mifflin	206	98	108	48	..	33	17	4	..	..	5	..	..	..	1	..	..	..
Mineral Point	208	46	162	110	..	..	22	1	1	..	27	..	1	..	..	..	..	..
Pulaski	196	126	70	10	1	..	29	3	..	..	19	..	..	5	1	1	1	..
Ridgeway	351	47	304	61	3	93	25	33	12	2	75	..	..	..	..	..	..	..
Waldwick	210	62	148	33	1	1	16	42	1	..	54	..	..	..	..	..	..	..
Wyoming	101	50	51	13	3	4	1	8	10	..	12	..	..	..	..	..	..	..

Lafayette County—1860

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Ireland	British America	Germany	Scandinavia	Wales	Scotland	France	Switzerland	Unknown
Argyle	204	95	109	26	19	2	2	55	1	4	..	..	..
Belmont	118	68	47	10	8	1	6	1	18	1	1	1	3
Benton	375	32	343	161	126	10	36	1	..	7	2	..	..
Center	347	208	139	35	73	8	16	2	..	4	..	1	..
Elk Grove	230	57	173	90	52	4	23	..	..	4	..	..	..
Fayette	173	105	68	25	30	3	4	3	1	..	1	1	..
Gratiot	174	109	65	17	36	4	2	..	5	..	..	1	..
Kendall	194	65	129	22	88	..	15	..	3	..	..	1	..
Monticello	72	30	41	19	6	12	3	..	..	1	..	..	1
New Diggings	314	40	273	113	153	..	4	..	..	3	..	..	1
Shullsburg	468	91	377	147	184	10	25	..	..	6	5	..	..
Wayne	139	118	21	3	1	6	2	9	..	..	..	..	..
White Oak Springs	81	26	55	32	17	1	3	..	..	2	..	..	..
Willow Springs	170	54	116	30	74	1	7	..	1	2	..	1	..
Wiota	214	97	117	22	27	2	..	63	..	2	..	1	..

Grant County—1870

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Ireland	Germany	British America	France	Bohemia	Switzerland	Scandinavia	Poland	Italy	Holland	Austria	Belgium
Beetown	202	129	73	39	..	1	10	17	6	..	..	..	..	..	..	..	..	..
Bloomington .	162	108	54	18	3	..	11	19	2	1	..	..	..	..	..	..	..	..
Blue River ...	106	8	98	2	..	..	18	17	..	..	49	..	12	..	..	..	..	..
Boscobel	25	17	8	1	..	..	1	4	..	..	..	1	1	..	..	..	..	..
Cassville	134	49	85	7	1	..	2	72	1	1	..	..	1	..	..	..	..	..
Clifton	198	98	100	37	..	..	24	19	6	1	..	..	11	2	..	..	..	..
Ellenboro	153	96	57	21	1	1	13	19	..	2	..	..	..	..	..	..	..	..
Fennimore ...	337	208	129	39	5	..	12	33	7	..	3	..	30	..	..	..	..	..
Glen Haven ..	181	72	109	31	2	..	21	45	5	1	..	2	..	..	1	1	..	..
Harrison	194	120	74	21	..	1	18	28	2	..	..	3	..	..	..	1	..	..
Hazel Green .	257	37	220	117	1	..	35	53	4	1	..	3	..	..	..	6	..	..
Hickory Grove	165	56	109	8	2	..	2	22	5	..	14	2	50	..	..	..	4	..
Jamestown ...	212	70	142	33	3	..	12	77	4	1	..	5	..	..	..	7	..	..
Lancaster	503	277	226	63	12	1	35	97	9	2	2	4	..	..	..	..	1	..
Liberty	156	30	126	14	2	..	12	96	1	..	1	..	..	..	..	..	..	..
Lima	205	137	68	27	..	1	23	14	1	2	..	..	..	..	..	..	..	..
Little Grant .	142	59	83	41	11	..	16	11	3	..	..	..	1	..	..	..	..	..
Marion	120	71	49	11	..	..	6	24	2	1	..	2	3	..	..	..	..	..
Millville	45	30	15	7	2	..	3	2	1	..	..	..	..	..	..	..	..	..
Mount Hope .	137	91	46	7	6	1	26	2	3	..	..	1	..	..	..	..	..	..
Muscoda	172	63	109	5	1	..	6	38	5	5	43	2	3	..	..	..	1	..
Paris	165	57	108	17	3	..	2	80	1	1	..	..	..	..	..	4	..	..
Patch Grove .	119	76	43	10	..	..	28	2	1	1	..	..	1	..	..	..	..	..
Platteville	205	68	137	46	2	1	19	62	5	..	..	1	1	..	..	..	..	..
Potosi	501	142	359	99	1	1	45	186	10	3	1	5	..	..	..	2	4	2
Smelser	234	116	118	54	..	..	22	34	8	..	..	..	..	..	..	..	..	..
Waterloo	182	95	87	6	2	..	17	49	3	3	..	7	..	..	..	..	..	..
Watterstown .	107	60	47	4	..	1	18	..	1	..	9	..	14	..	..	..	..	..
Wingville	184	96	88	22	7	1	6	21	4	1	12	..	12	2	..	..	..	..
Woodman	108	63	45	15	4	..	16	7	3	..	..	..	..	..	..	..	..	..
Wyalusing ...	162	116	46	4	1	..	4	23	3	..	..	9	1	..	..	..	1	..

Iowa County—1870

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Germany	Ireland	Scandinavia	British America	Bohemia	Switzerland	Austria	France	Holland	Belgium	Poland	So. America
Arena	369	91	278	78	2	4	37	65	50	27	9	3	3	..	..	..	..	..
Clyde	127	43	84	9	1	..	4	42	20	3	4	..	..	1	..	..	..	..
Dodgeville	404	34	370	127	15	84	45	19	72	3	3	..	..	..	1	1	..	..
Highland	426	71	355	66	..	6	91	76	85	5	22	1	..	1	..	..	2	..
Linden	360	74	286	229	..	18	16	12	8	2	1	..	..	..	..	..	..	..
Mifflin	366	209	157	78	2	41	20	10	2	3	..	1	..	..	..	..	..	..
Mineral Point	273	62	211	131	2	2	35	33	2	2	1	..	..	2	..	..	..	1
Moscow	160	18	142	11	..	..	5	19	105	1	..	..	..	..	1	..	..	..
Pulaski	197	73	124	6	..	1	70	16	5	2	22	..	..	1	..	..	1	..
Ridgeway	450	45	405	48	1	94	36	103	86	25	1	..	9	1	1	..	..	..
Waldwick	151	37	114	39	2	3	16	46	5	1	..	..	..	1	..	1	..	..
Wyoming	130	63	67	19	..	7	..	15	11	14	1	..	..	..	..	..	..	..

Lafayette County—1870

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Germany	Ireland	Scandinavia	British America	Austria	Switzerland	France	Poland
Argyle	221	82	139	36	6	..	..	13	84	..	..	..	..	..
Belmont	223	98	125	35	2	27	34	21	..	2	1	2	1	..
Benton	322	40	282	131	6	..	17	114	1	12	..	..	1	..
Blanchard	87	22	65	3	1	..	4	23	33	..	1	..	..	..
Darlington	529	304	225	76	5	2	13	108	7	14	..	..	..	..
Elk Grove	225	60	165	66	5	1	37	49	3	4	..	..	..	..
Fayette	215	120	95	29	..	..	7	36	23	..	..	..	..	..
Gratiot	315	171	144	29	7	..	24	62	16	4	..	1	1	..
Kendall	185	31	154	28	2	1	24	97	..	2	..	..	..	..
Monticello	81	31	50	21	2	1	10	10	..	5	..	1	..	..
New Diggings	335	53	282	141	2	..	7	130	..	2	..	..	..	..
Seymour	75	12	63	22	1	..	16	22	..	..	..	..	..	2
Shullsburg	482	98	384	155	1	3	31	179	1	9	..	2	3	..
Wayne	189	148	41	5	..	..	14	6	12	4	..	..	..	..
White Oak Springs	88	26	62	37	1	..	3	20	..	1	..	..	..	..
Willow Springs	201	67	134	42	1	..	14	71	1	4	..	1	..	..
Wiota	311	138	173	30	2	1	1	40	91	7	..	1	..	..

Grant County—1905

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Scandinavia	Germany	Ireland	Canada	Austria	Switzerland	Bohemia	Italy	Poland	Holland	France	Belgium
Beetown	253	210	43	14	..	..	2	23	2	2	..	..	..	..	..	..	..	..
Bloomington	129	107	22	6	2	..	..	9	3	1	..	1	..	..	..	..	..	..
Boscobel	31	23	8	1	..	..	2	3	..	..	2	..	..	..	..	..	..	..
Cassville	122	96	26	1	..	..	..	22	2	..	..	1	..	..	..	..	..	..
Castle Rock	131	61	70	1	..	..	12	5	1	1	..	..	50	..	..	..	..	..
Clifton	235	171	64	17	1	..	9	8	12	3	..	..	10	3	1	..	..	..
Ellenboro	145	124	21	6	..	..	..	13	1	1	..	..	..	..	..	..	..	..
Fennimore	159	112	47	4	..	..	15	21	3	..	..	..	1	..	3	..	..	..
Glen Haven	128	99	29	9	..	..	..	13	4	3	..	..	..	..	..	..	..	..
Harrison	194	165	29	2	..	..	..	24	1	..	..	1	..	1	..	..	..	..
Hazel Green	165	118	47	14	..	..	..	25	3	..	..	1	..	..	..	3	1	..
Hickory Grove	133	72	61	2	..	..	32	14	..	..	..	1	12	..	..	..	..	..
Jamestown	190	125	65	1	..	..	..	49	5	1	..	..	..	..	..	6	1	2
Liberty	182	127	55	4	..	..	..	45	2	1	..	2	1	..	..	..	..	..
Lima	203	174	29	8	..	..	..	15	4	..	..	1	..	..	..	..	1	..
Little Grant	104	80	24	7	..	..	..	11	4	..	..	2	..	..	..	..	..	..
Marion	115	80	35	3	..	..	4	25	2	..	1	..	..	..	..	..	..	..
Millville	60	53	7	1	1	..	1	1	2	1	..	..	..	..	..	..	..	..
Mount Hope	155	134	21	7	1	..	..	4	7	2	..	..	..	..	..	..	..	..
Mount Ida	158	122	36	7	1	..	3	20	3	1	..	..	..	..	..	..	1	..
Muscoda	82	48	34	..	..	..	..	7	..	..	..	..	27	..	..	..	..	..
North Lancaster	113	83	30	7	..	..	1	16	6	..	..	..	..	..	..	..	..	..
Paris	157	117	40	1	..	..	..	38	..	..	..	..	..	..	..	1	..	..
Patch Grove	133	103	30	12	1	..	2	2	11	..	1	..	1	..	..	..	..	..
Platteville	157	125	32	9	1	..	..	20	2	..	..	..	..	..	..	..	..	..
Potosi	312	241	71	7	..	1	1	55	2	1	..	4	..	..	..	..	..	..
Smelser	203	158	45	15	1	..	1	22	4	..	..	..	..	..	..	2	..	..
South Lancaster	162	137	25	4	..	..	..	17	1	1	1	..	..	..	..	..	1	..
Waterloo	178	158	20	1	1	..	..	12	1	1	..	2	1	1	..	..	..	..
Watterstown	143	115	28	1	..	..	13	2	1	1	..	..	10	..	..	..	..	..
Wingville	157	94	63	7	..	..	21	18	..	2	5	..	10	..	..	..	..	..
Woodman	87	68	19	2	1	..	..	7	9	..	..	..	..	..	..	..	..	..
Wyalusing	241	200	41	18	..	..	3	11	2	2	..	5	..	..	..	..	..	..

Iowa County—1905

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Germany	Ireland	Scandinavia	British America	Switzerland	Austria	Bohemia	Poland	Italy	France	Unknown
Arena	279	200	79	22	..	1	9	17	17	5	6	2	..	..	..	..	..
Brigham	288	155	132	3	..	32	23	12	43	2	14	3	..	..	..	..	1
Clyde	120	84	36	1	..	..	7	6	19	1	1	..	1	..	..	..	..
Dodgeville	316	213	103	24	2	12	17	3	35	1	7	..	2	..	..	..	..
Eden	126	84	42	13	..	..	11	1	11	..	..	1	5	..	..	..	..
Highland	281	183	98	2	..	..	49	6	29	1	..	..	10	1	..	..	..
Linden	242	164	78	29	..	5	15	..	23	2	3	..	..	..	1	..	..
Mifflin	260	195	65	34	..	11	15	1	1	3	..	..	..	..	..	..	..
Mineral Point	257	178	79	33	..	..	26	11	1	5	3	..	..	..	..	..	..
Moscow	231	134	97	1	5	..	3	7	59	2	19	..	..	1	..	..	..
Pulaski	159	91	68	..	..	1	40	3	9	..	..	..	14	..	..	1	..
Ridgeway	144	97	47	6	..	6	7	12	6	3	7	..	..	..	..	..	..
Waldwick	155	106	49	23	..	3	4	13	3	..	3	..	..	..	..	..	..
Wyoming	131	95	36	6	2	2	5	2	14	3	..	1	1	..	..	..	..

Lafayette County—1905

Heads of Families Classified According to Country of Birth

Town	Total	American	Foreign	England	Scotland	Wales	Germany	Ireland	Scandinavia	British America	Switzerland	France	Holland
Argyle	168	96	72	4	..	..	6	2	51	1	8	..	..
Belmont	134	91	43	4	..	5	31	2	..	..	..	1	..
Benton	173	147	26	13	..	..	3	9	..	..	..	..	1
Blanchard	88	42	46	1	..	..	4	5	32	..	4	..	..
Darlington	225	167	58	12	1	..	7	15	12	..	11	..	..
Elk Grove	148	109	39	11	1	..	22	2	1	1	..	..	1
Fayette	172	124	48	9	..	..	..	9	22	..	6	..	2
Gratiot	237	163	74	3	1	..	21	17	19	..	12	1	..
Kendall	120	86	34	4	..	..	11	17	..	..	2	..	..
Lamont	107	74	33	5	..	..	7	1	14	..	6	..	..
Monticello	63	52	11	2	..	..	3	2	4	..	..	..	..
New Diggings	210	147	63	40	1	..	1	21	..	..	..	..	..
Seymour	130	94	36	13	..	..	5	12	..	2	4	..	..
Shullsburg	143	102	41	14	..	..	7	15	2	..	3	..	..
Wayne	243	164	79	6	1	..	37	5	15	6	9	..	..
White Oak Springs	62	47	15	10	1	..	..	3	1	..	..	..	..
Willow Springs	204	159	45	4	1	..	3	18	7	4	8	..	..
Wiota	336	195	141	1	..	1	20	8	90	2	16	3	..

Grant County—1860

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Swiss	Woman Swiss	Man Bohemian	Woman Bohemian	Man French	Woman French	Man Russian	Woman Russian	Man Cuban	Woman Cuban
Beetown	22	3	19	10	2	1	..	..	..	2	..	3	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..
Blue River	4	..	4	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..
Boscobel	8	5	3	..	2	..	..	..	..	1	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	1
Cassville	13	4	9	2	1	..	..	..	..	..	..	4	1	1	1	1	..	1	1	..	..	..	..	..	..	..	..
Clifton	11	7	4	..	3	..	..	..	..	..	2	2	1	1	1	..	..	1	..	..	..	..	..	..	..	..	..
Ellenboro	12	1	11	5	1	..	..	..	..	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Fennimore	24	8	16	7	2	3	..	..	..	..	2	3	..	3	4	..	..	..	..	..	..	..	..	..	..	..	..
Glen Haven	17	5	12	7	2	..	..	..	..	2	..	..	1	2	2	..	..	1	..	..	..	..	..	..	..	..	..
Harrison	13	3	10	3	2	..	1	..	..	2	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hazel Green	31	12	19	8	7	1	..	..	..	6	3	3	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..
Hickory Grove	6	4	2	1	1	..	..	..	..	..	2	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Jamestown	25	10	15	7	5	..	..	..	..	1	..	2	2	5	3	..	..	..	..	..	..	..	..	..	..	..	..
Lancaster	39	15	24	9	6	1	..	..	..	8	2	4	2	1	4	..	..	..	..	1	..	..	..	..	1	..	..
Liberty	11	5	6	1	2	..	1	..	..	1	1	3	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..
Lima	14	3	11	3	..	..	..	1	..	3	..	..	1	2	2	..	..	..	..	..	..	2	..	..	..	..	..

GRANT COUNTY—1860—Continued

MARRIAGES OF AMERICAN-BORN WITH FOREIGN-BORN

TOWN	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Swiss	Woman Swiss	Man Bohemian	Woman Bohemian	Man French	Woman French	Man Russian	Woman Russian	Man Cuban	Woman Cuban
Little Grant	7	2	5	4	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Marion	6	4	2	1	3	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Millville	27	13	14	4	6	3	2	..	..	4	2	..	1	3	2	..	..	..	..	..	..	..	..	..	..	..	..
Muscoda	4	1	3	1	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Paris	10	5	5	3	2	..	..	..	..	..	2	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Patch Grove ...	16	8	8	3	4	3	..	..	..	2	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
Platteville	12	5	7	2	3	..	..	1	..	1	1	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Potosi	24	7	17	6	4	..	..	..	..	..	..	10	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..
Smelser	19	7	12	3	3	1	..	..	..	3	1	3	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..
Tafton	14	4	10	2	2	..	..	..	..	2	1	..	1	6	..	..	..	..	..	..	..	..	..	..	..	..	..
Waterloo	16	9	7	1	5	..	..	..	..	1	1	2	..	2	1	..	1	..	..	..	..	1	1	..	..	..	..
Watterstown ...	2	2	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wingville	12	3	9	2	2	2	..	..	..	1	..	2	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..
Wyalusing	12	5	7	2	2	..	..	..	..	2	..	..	..	2	2	..	..	1	..	..	..	..	1	..	..	..	..
TOTAL	431	160	271	97	75	16	5	2	..	45	24	55	13	45	34	1	2	5	3	2	..	3	2	..	1	..	1

Iowa County—1860

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Swiss	Woman Swiss	Man Polish	Woman Polish
Arena	21	6	15	12	5	..	..	1	..	2	1	..	..	..	..	..	..	..	..
Clyde	6	5	1	..	3	..	..	..	..	..	1	..	..	1	1	..	..	..	..
Dodgeville	13	3	10	2	1	1	..	5	1	2	..	..	1	..	..	..	..	..	..
Highland	22	7	15	4	3	..	1	1	..	2	..	4	2	3	1	1	..	..	..
Linden	14	3	11	9	1	..	..	..	1	1	..	..	..	1	1	..	..	..	..
Mifflin	8	4	4	4	1	..	..	..	..	..	..	..	1	..	2	..	..	..	..
Mineral Point	15	1	14	8	1	..	..	..	..	3	..	2	..	1	..	..	..	..	..
Pulaski	12	3	9	3	2	..	..	..	..	1	1	2	..	2	..	..	..	1	..
Ridgeway	18	6	12	1	3	2	..	3	1	2	1	..	..	4	1	..	..	..	..
Waldwick	10	2	8	2	1	..	..	..	..	4	..	2	..	..	1	..	..	..	..
Wyoming	12	5	7	3	3	1	..	..	..	2	1	..	..	1	1	..	..	..	..
Total	151	45	106	48	24	4	1	10	3	19	5	10	4	13	8	1	..	1	..

Lafayette County—1860

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Swiss	Woman Swiss	Man French	Woman French
Argyle	17	9	8	2	2	1	1	1	..	2	3	1	..	1	1	..	2	..	..	..	..
Belmont	7	..	7	2	..	1	..	2	..	..	..	..	..	1	..	..	..	..	..	1	..
Benton	30	6	24	9	5	9	..	..	..	..	1	..	..	6	..	..	..	..	..	..	..
Center	24	14	10	4	3	1	..	..	1	2	2	..	..	2	8	1	..	..	..	..	..
Elk Grove	26	10	16	10	4	1	..	..	..	4	6	..	..	1	..	..	..	..	..	..	..
Fayette	14	4	10	6	1	..	1	..	..	3	1	..	..	1	1	..	..	..	..	..	..
Gratiot	14	7	7	1	2	..	..	..	..	4	1	..	..	1	4	..	..	1	..	..	..
Kendall	16	5	11	2	2	..	..	..	..	6	2	3	1	..	..	..	..	..	..	..	..
Monticello	13	2	11	3	2	1	..	..	..	1	..	2	..	4	..	..	..	..	..	..	..
New Diggings	11	3	8	4	2	1	..	..	..	3	..	..	1	..	..	..	..	..	..	..	..
Shullsburg	41	13	28	11	6	1	..	..	..	10	5	1	..	5	2	..	..	..	..	..	..
Wayne	7	1	6	1	..	..	..	..	..	1	..	..	..	4	1	..	..	..	..	..	..
White Oak Springs	6	1	5	1	1	1	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..
Willow Springs	11	4	7	3	1	1	..	..	..	2	..	..	1	1	2	..	..	..	..	..	..
Wiota	12	2	10	5	1	..	..	..	..	4	..	..	..	..	1	..	..	1	..	..	..
Total	249	81	168	64	32	18	2	3	1	44	21	8	3	27	20	1	2	2	..	1	..

Grant County—1870

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man Canadian	Woman Canadian	Man Scandinavian	Woman Scandinavian	Man French	Woman French	Man Bohemian	Woman Bohemian	Man Swiss	Woman Swiss	Man Austrian	Woman Austrian
Beetown	20	3	17	9	3	..	..	1	..	4	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..
Bloomington	13	1	12	5	1	1	..	..	..	2	..	3	..	1	..	..	..	..	..	..	..	..	..	..	..
Blue River	3	...	3	...	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Boscobel	1	1	...	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cassville	9	4	5	2	3	..	..	..	..	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..
Clifton	16	5	11	4	2	..	..	..	..	4	1	2	..	1	2	..	..	..	..	..	..	..	..	..	..
Ellenboro	13	1	12	6	..	..	..	1	..	2	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..
Fennimore	34	8	26	10	5	2	..	..	..	3	1	6	1	4	1	..	..	..	..	1	..	..	..	..	..
Glen Haven	18	6	12	7	2	..	..	..	..	1	..	..	..	3	4	..	..	..	..	..	..	1	..	..	..
Harrison	12	3	9	1	1	..	1	..	..	1	1	6	..	..	..	..	..	..	..	..	..	1	..	..	..
Hazel Green	28	8	20	7	5	..	..	..	..	7	2	4	1	1	..	..	..	1	..	..	..	..	..	..	..
Hickory Grove	18	6	12	3	1	2	1	..	..	..	2	1	..	5	2	..	..	..	..	..	..	1	..	..	..
Jamestown	21	13	8	3	7	..	..	..	..	1	4	2	..	1	2	..	..	..	..	..	..	1	..	..	..
Lancaster	52	11	41	9	7	2	..	..	..	8	2	15	1	4	1	1	..	..	..	..	..	1	..	1	..
Liberty	11	2	9	2	2	1	..	..	..	1	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..
Lima	17	4	13	5	1	..	..	1	..	5	2	1	..	1	1	..	..	..	..	..	..	..	..	..	..

GRANT COUNTY—1870—Continued

MARRIAGES OF AMERICAN-BORN WITH FOREIGN-BORN

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man Canadian	Woman Canadian	Man Scandinavian	Woman Scandinavian	Man French	Woman French	Man Bohemian	Woman Bohemian	Man Swiss	Woman Swiss	Man Austrian	Woman Austrian
Little Grant	23	7	16	10	4	..	1	..	..	1	1	2	..	2	1	1	..	..	..	..	..	..	..	..	..
Marion	11	6	5	2	3	..	..	..	..	1	..	...	..	2	3	..	..	..	..	..	..	..	..	..	..
Millville	4	2	2	1	1	..	..	..	..	1	..	...	..	..	1	..	..	..	..	..	..	..	..	..	..
Mount Hope	15	6	9	2	3	4	1	1	..	..	1	...	..	2	1	..	..	..	..	..	..	..	..	..	..
Muscoda	13	4	9	2	1	1	..	..	..	1	..	2	..	1	3	1	..	..	..	..	..	1	..	..	..
Paris	16	4	12	5	3	..	..	..	..	..	..	6	1	1	..	..	..	..	..	..	..	..	..	..	..
Patch Grove	10	1	9	2	..	..	..	..	..	4	1	2	..	..	..	..	..	1	..	..	..	..	..	..	..
Platteville	25	9	16	7	5	..	..	..	..	..	2	7	..	1	1	..	..	..	..	..	..	1	1	..	..
Potosi	56	15	41	14	9	1	1	..	..	4	2	16	2	4	1	..	..	..	..	..	..	..	..	2	..
Smelser	26	10	16	6	6	..	..	..	..	1	1	5	1	4	2	..	..	..	..	..	..	..	..	..	..
Waterloo	24	6	18	3	1	1	1	..	..	5	2	5	..	1	2	..	..	1	..	..	..	2	..	..	..
Watterstown	8	5	3	1	1	..	..	..	..	2	2	...	..	..	1	..	1	..	..	..	..	..	..	..	..
Wingville	13	2	11	7	1	1	..	..	..	..	..	3	..	..	..	..	1	..	..	..	..	..	..	..	..
Woodman	11	5	6	4	4	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..
Wyalusing	13	5	8	...	2	..	..	..	..	1	1	2	2	1	..	..	..	..	..	..	..	4	..	..	..
TOTAL	554	163	391	139	85	16	6	4	..	62	29	101	9	42	30	5	3	5	..	1	..	13	1	3	..

Iowa County—1870

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Swiss	Woman Swiss	Man Bohemian	Woman Bohemian	Man French	Woman French	Man South American	Woman South American
Arena	34	9	25	14	5	..	..	3	2	6	1	2	..	..	1	..	..	..	..	..	..	..	..	..	..
Clyde	15	8	7	2	2	..	..	..	..	4	2	..	1	1	3	..	..	..	..	..	..	..	..	..	..
Dodgeville	31	7	24	12	5	3	..	4	..	2	1	1	1	1	..	1	..	..	..	..	..	..	..	..	..
Highland	38	8	30	14	2	..	..	1	..	7	3	5	2	2	1	..	..	1	..	..	..	..	..	..	..
Linden	59	21	38	35	18	..	..	1	1	..	1	1	..	..	1	..	..	..	..	1	..	..	..	..	..
Mifflin	40	9	31	19	4	1	..	2	2	2	..	4	2	3	..	..	1	..	..	..	..	..	..	..	..
Mineral Point	50	17	33	21	11	..	..	2	..	3	2	3	..	1	3	..	1	..	..	..	..	2	..	1	..
Moscow	6	1	5	2	..	..	..	..	..	2	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..
Pulaski	16	6	10	4	2	..	..	..	..	1	1	4	..	1	1	..	1	..	1	..	..	..	..	..	..
Ridgeway	39	11	28	5	6	..	..	9	3	7	..	3	1	1	..	3	1	..	..	..	..	..	..	..	..
Waldwick	13	6	7	4	5	..	..	..	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
Wyoming	20	10	10	6	5	..	..	2	1	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2
Total	361	113	248	138	65	4	..	24	10	37	11	25	7	11	13	4	4	1	1	1	..	2	..	1	2

Lafayette County—1870

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Swiss	Woman Swiss	Man French	Woman French	Man Austrian	Woman Austrian
Argyle	33	17	16	9	8	..	1	..	..	4	2	..	..	..	..	3	6	..	..	..	..	..	..
Belmont	39	11	28	11	4	1	1	3	1	7	3	3	..	1	2	..	..	..	..	1	..	1	..
Benton	42	7	35	17	3	..	1	..	..	9	2	1	..	8	..	..	..	..	..	..	1	..	..
Blanchard	7	1	6	1	..	..	..	..	..	5	1	..	..	..	..	..	..	..	..	..	..	..	..
Darlington	51	18	33	13	8	1	2	..	1	10	6	1	..	6	1	2	..	..	..	..	..	..	..
Elk Grove	24	9	15	5	5	..	..	..	..	6	3	3	..	1	1	..	..	..	..	..	..	..	..
Fayette	23	10	13	7	6	..	1	..	..	4	..	..	1	1	2	1	..	..	..	..	..	..	..
Gratiot	32	7	25	10	3	1	..	..	..	8	2	5	..	..	2	..	..	1	..	..	..	..	..
Kendall	16	3	13	6	2	..	..	..	..	5	1	2	..	..	..	..	..	..	..	..	..	..	..
Monticello	16	1	15	6	1	1	..	1	..	1	..	4	..	2	..	..	..	..	..	..	..	..	..
New Diggings	35	7	28	14	2	1	..	..	..	9	3	2	2	2	..	..	..	..	..	..	..	..	..
Seymour	12	2	10	4	1	..	..	..	..	2	..	4	..	..	1	..	..	..	..	..	..	..	..
Shullsburg	55	10	45	18	4	..	..	..	1	15	2	4	..	5	3	1	..	1	..	1	..	..	..
Wayne	10	1	9	...	..	..	1	..	..	3	..	2	..	3	..	1	..	..	..	..	..	..	..
White Oak Springs	7	1	6	5	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Willow Springs	23	4	19	7	1	..	..	..	1	9	..	..	..	2	1	1	..	..	..	..	1	..	..
Wiota	30	7	23	8	1	1	1	1	..	4	1	..	1	3	..	6	3	..	..	..	..	..	..
Total	455	116	339	141	50	6	8	5	4	102	26	31	4	34	13	15	9	2	..	2	2	1	..

Grant County—1905

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Bohemian	Woman Bohemian	Man Swiss	Woman Swiss	Man Austrian	Woman Austrian	Man Polish	Woman Polish	Man Italian	Woman Italian	Man Dutch	Woman Dutch	Man French	Woman French	Man Belgian	Woman Belgian
Beetown	14	1	13	4	..	..	..	1	..	4	..	2	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bloomington	10	1	9	1	1	1	..	1	..	5	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Boscobel	4	1	3	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
Cassville	9	1	8	..	..	..	..	..	1	7	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Castle Rock	19	6	13	..	..	..	..	..	..	..	..	..	..	5	..	8	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clifton	29	8	21	5	4	..	..	6	..	5	1	1	1	3	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ellenboro	11	2	9	4	..	..	..	..	..	4	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fennimore	25	10	15	1	3	..	..	2	1	7	5	..	..	3	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Glen Haven	19	5	14	7	1	..	..	1	..	6	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Harrison	22	7	15	2	..	..	..	..	..	12	5	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..
Hazel Green	23	1	22	7	..	..	..	1	..	10	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	1	..	..	..
Hickory Grove	22	3	19	..	..	..	..	..	..	8	..	..	..	4	..	6	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Jamestown	23	11	12	..	1	..	..	..	1	8	7	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..
Liberty	23	11	12	2	..	..	..	1	..	8	11	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lima	11	2	9	6	..	..	..	..	1	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Little Grant	14	4	10	5	1	..	..	1	1	2	1	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Marion	14	6	8	1	..	..	..	..	..	7	5	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

GRANT COUNTY—1905—Continued

MARRIAGES OF AMERICAN-BORN WITH FOREIGN-BORN

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Bohemian	Woman Bohemian	Man Swiss	Woman Swiss	Man Austrian	Woman Austrian	Man Polish	Woman Polish	Man Italian	Woman Italian	Man Dutch	Woman Dutch	Man French	Woman French	Man Belgian	Woman Belgian
Millville	5	2	3	1	1	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mount Hope	14	6	8	4	3	..	..	2	1	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mount Ida	24	2	22	6	1	1	..	..	..	11	1	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Muscoda	11	4	7	..	..	..	..	..	..	3	1	..	..	..	..	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
North Lancaster	15	3	12	4	1	..	..	2	..	5	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Paris	15	4	11	1	1	..	..	..	..	10	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Patch Grove	16	2	14	3	1	1	..	5	1	2	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Platteville	12	1	11	4	..	1	..	1	..	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Potosi	35	11	24	3	3	..	1	2	2	17	5	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Smelser	17	6	11	4	1	..	..	1	..	6	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
South Lancaster	17	7	10	3	1	..	..	1	..	5	6	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Waterloo	16	9	7	..	..	1	..	..	1	2	6	1	1	..	..	..	1	2	..	..	..	..	..	1	..	..	..	..	..	..	..
Watterstown	17	10	7	1	1	..	..	..	..	1	2	..	1	5	2	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wingville	18	4	14	4	..	1	..	..	..	2	1	2	..	2	2	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Woodman	4	..	4	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wyalusing	35	17	18	9	4	..	..	..	1	3	10	1	2	2	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	.
TOTAL	563	168	395	93	29	6	1	31	11	171	84	15	12	31	8	24	19	10	2	3	..	1	..	2	..	4	2	2	..	2	..

Iowa County—1905

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British Aberican	Man Scandinavian	Woman Scandinavian	Man Swiss	Woman Swiss	Man Austrian	Woman Austrian	Man Bohemian	Woman Bohemian	Man Polish	Woman Polish	Man French	Woman French
Arena	39	10	29	11	5	..	..	1	1	2	1	7	..	..	..	5	3	2	..	1	..	..	..	..	..	..	..
Brigham	34	3	31	1	..	..	..	5	..	1	..	10	..	2	..	10	1	1	2	1	..	..	..	..	..	..	..
Clyde	14	3	11	..	..	..	..	..	..	3	..	2	..	..	..	5	2	1	..	..	..	..	1	..	..	..	..
Dodgeville	39	14	25	7	4	2	..	2	2	..	..	7	1	..	1	7	6	..	..	..	..	..	..	..	..	..	..
Eden	8	3	5	3	1	..	..	..	..	..	..	1	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..
Highland	31	9	22	..	..	..	..	..	..	2	1	13	5	..	..	6	3	..	..	..	..	..	..	1	..	..	..
Linden	28	4	24	14	2	..	..	..	..	..	1	5	..	1	1	4	..	..	..	..	..	..	..	..	..	..	..
Mifflin	30	8	22	12	3	..	..	4	..	1	..	4	2	..	2	1	1	..	..	..	..	..	..	..	..	..	..
Mineral Point	22	3	19	10	2	..	..	..	..	4	..	2	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..
Moscow	20	3	17	1	..	..	..	..	..	3	..	..	..	2	..	8	3	3	..	..	..	..	..	..	..	..	..
Pulaski	25	10	15	..	1	..	..	..	..	1	..	9	3	..	1	2	4	..	..	..	..	2	1	..	..	1	..
Ridgeway	20	6	14	2	2	..	..	3	1	3	1	1	..	3	1	2	1	..	..	..	..	..	..	..	..	..	..
Waldwick	19	2	17	11	..	..	..	..	..	4	..	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Wyoming	21	6	15	4	1	1	..	2	..	..	..	3	..	1	3	3	2	..	..	1	..	..	..	..	..	..	..
Total	350	84	266	76	21	3	..	17	4	24	4	66	12	11	11	55	28	7	2	3	..	2	2	1	..	1	..

Lafayette County—1905

Marriages of American-born with Foreign-born

Town	No. of Intermarriages	Man American-born	Woman American-born	Man English	Woman English	Man Scotch	Woman Scotch	Man Welsh	Woman Welsh	Man Irish	Woman Irish	Man German	Woman German	Man British American	Woman British American	Man Scandinavian	Woman Scandinavian	Man Swiss	Woman Swiss	Man Dutch	Woman Dutch	Man French	Woman French
Argyle	18	4	14	1	..	..	..	..	..	..	1	1	..	..	..	10	3	2	..	..	..	..	..
Belmont	22	7	15	3	..	..	..	4	..	1	..	7	7	..	..	..	..	..	..	..	..	..	..
Benton	10	5	5	4	3	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..
Blanchard	10	3	7	..	..	..	..	..	..	1	..	2	1	..	..	3	2	1	..	..	..	..	..
Darlington	25	7	18	6	1	1	1	..	..	3	..	5	..	..	..	2	5	1	..	..	..	..	..
Elk Grove	22	9	13	1	6	1	..	..	..	2	..	9	2	..	..	..	..	..	..	..	1	..	..
Fayette	19	4	15	5	..	..	..	..	..	3	1	..	2	..	..	5	1	1	..	1	..	..	..
Gratiot	28	5	23	2	1	1	..	..	..	5	..	6	4	..	..	7	..	2	..	..	..	..	..
Kendall	16	4	12	2	1	..	..	..	..	4	..	5	3	..	..	..	..	1	..	..	..	..	..
Lamont	15	5	10	5	1	..	..	..	..	..	..	2	..	..	..	2	4	1	..	..	..	..	..
Monticello	6	2	4	1	1	..	..	..	..	1	1	1	..	..	..	1	..	..	..	..	..	..	..
New Diggings	23	4	19	16	2	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	1	..	..
Seymour	19	5	14	6	2	..	..	..	..	7	2	1	1	..	..	..	..	..	..	..	..	..	..
Shullsburg	19	3	16	7	2	..	..	..	..	5	..	3	1	1	..	..	..	..	..	..	..	..	..
Wayne	29	11	18	4	1	..	..	..	..	2	2	7	3	..	..	5	3	..	1	..	..	..	1
White Oak Springs	5	2	3	2	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Willow Springs	20	4	16	..	1	..	..	..	..	4	1	2	..	4	1	5	..	1	1	..	..	..	..
Wiota	40	12	28	1	1	..	1	..	..	1	..	3	2	1	..	21	8	1	..	..	..	..	..
Total	346	96	250	66	24	4	3	4	..	41	9	56	26	6	2	61	26	11	2	1	3	..	1

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